

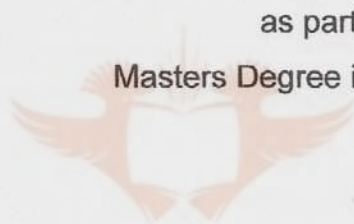
**A Survey to Establish
Perceptions of Homoeopathy
Among Pharmacists and Pharmacists' Assistants in Greater
Johannesburg**

A Dissertation Submitted to the

Faculty of Health Sciences, University of Johannesburg

as partial fulfilment of the

Masters Degree in Technology: Homoeopathy



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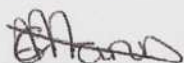
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DECLARATION

I, Taryn Diane Mann declare that this dissertation is my original and unaided work. It is being submitted for the Master of Technology Degree: Homoeopathy, at the University of Johannesburg. It has not been submitted before for the purposes of obtaining any diploma or degree at this or any other institution.



Taryn Diane Mann

4th day of November 2008



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ABSTRACT

Complementary and alternative therapies (CAM) have become increasingly widespread in countries throughout the world in recent years. Alternative medications, including homoeopathic, are now commonly available for purchase from pharmacies, health shops and even supermarkets in South Africa. Due to this, pharmacists particularly, as the point of first contact for members of the public, have an increased responsibility towards their patients to have a certain working knowledge of these products. However, pharmacists receive little training of this nature during their formal education. Their consequent lack of understanding about homoeopathy may be detrimental to the optimal health management of patients by pharmacists, as well as to the growth of the homoeopathic and alternative medicine industries in South Africa (Montagne, 1997).

The aim of this research was to establish the perceptions of homoeopathy among professional pharmacists and qualified pharmacists' assistants in the Greater Johannesburg area. The information gained is intended to provide valuable baseline information about how homoeopathy is viewed by these professionals and to provide a framework for further research in other geographic areas of South Africa. This information may also be helpful in the development of future homoeopathic education programmes for the pharmaceutical industry.

A sample group of 50 pharmacists and pharmacists' assistants working in retail pharmacies in the Greater Johannesburg area were randomly invited to complete a written survey regarding their personal and professional perceptions of homoeopathy. Twenty seven fully qualified pharmacists and 23 pharmacists' assistants completed the survey between the 25 October 2007 and the 16 January 2008.

The results indicated that in some respects there are differences of opinion between pharmacists and pharmacy assistants with regard to issues surrounding homoeopathy, as well as between people who have been qualified for different lengths of time. The results however, reflect a general trend toward acceptance and interest in homoeopathy in the pharmacy profession. There was little statistical difference between the answers given by male and female participants, or participants from different racial groups.

DEDICATION

I dedicate this dissertation to my husband, Warren, who has faultlessly loved, encouraged and supported me throughout my years of study.

Thank you.



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My sincere thanks go to the following people:

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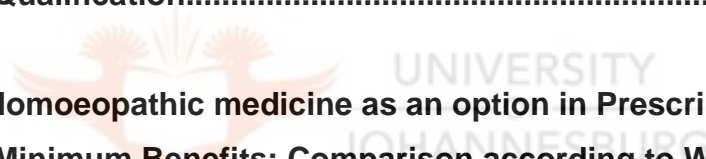
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CHAPTER 1

INTRODUCTION

1.1 Problem Statement

Alternative therapeutic modalities, including herbalism, homoeopathy and dietary supplements, have become increasingly popular in many countries world wide, including South Africa. Research has found that approximately 32 % of people in the United States use alternative medication in conjunction with their prescription and non-prescription medication (Montagne, 2007). This growth in the alternative medicine industry has led to a growing number of homoeopathic medicine departments in many pharmacies (Bormeth, 2007).

In South Africa, political change and economic growth has also created higher income levels. This in turn has increased consumer buying power and preventative health awareness (Berry, 2007) and with this, has developed increased interest in modalities such as homoeopathy and other alternative medical systems, as in the United States.

As a result, pharmacists have a responsibility towards their customers to understand these medications, their uses and possible interactions with other chemical drugs. However, very little to no formal training in these subjects is provided to pharmacy students during their studies. This may lead to inaccurate perceptions and a poor understanding of homoeopathy and alternative medicines in general (Montagne, 2007), which may impede both the pharmacist/patient relationship as well as the growth of the South African homoeopathy industry in general.

1.2 Aim of the Study

The research aimed to establish the personal perceptions and professional understanding of homoeopathy among qualified pharmacists and pharmacy assistants in Greater Johannesburg by means of a survey questionnaire.

1.2.1 Objectives

The aim of this study was achieved by the following objectives:

- Gathering data on the personal perceptions and professional knowledge of homoeopathy of pharmacists and pharmacy assistants in retail pharmacies in the Greater Johannesburg area.
- Analysing whether pharmacists and pharmacy assistants are currently promoting or denouncing homoeopathy to the public during the course of their work, and to provide further information on how homoeopathy might be promoted through cooperation with professionals in this field.

1.2.2 Outcomes

The aim of this study was to achieve the following outcomes:

- To provide valuable information regarding homoeopathy in South Africa and contribute to the development of the profession.
- To gauge trends in the field of pharmacy, with regards to the views, use and knowledge of homoeopathy by its members.
- To provide a framework for possible future education programmes for pharmacists and pharmacy assistants by the Homoeopathic Association of South Africa (HSA).

1.3 Importance of the Study

The evaluation of pharmacists' perceptions of homoeopathy is important for several reasons:

- Firstly, the research will provide information for those in the homoeopathic profession that will be useful in ascertaining whether or not there is a need and/or a desire among pharmacists to receive training regarding the homoeopathic system of medicine and over-the-counter (OTC) homoeopathic products that they may sell in their stores.
- Secondly, the information gained will provide an understanding of how

Homoeopathic and alternative medicine is being marketed to the general public by pharmacists. Many people will first come into contact with, or learn about homoeopathy and alternative modalities in a retail pharmacy setting. Therefore pharmacists can be seen as a very large and powerful tool that the industry may use to increase awareness of and growth within the alternative medicine sector. For this reason it is important to establish whether or not the public's initial introduction to homoeopathy, is accurate, as well as positive.

- Thirdly, the results of the study will establish a foundation for the development of future education and training programs, aimed at providing pharmacists with a working knowledge of the system of homoeopathic medicine. This will enable them to adequately explain and recommend homoeopathics to their customers.



CHAPTER 2

LITERATURE REVIEW

2.1. Introduction

Complementary and alternative therapies (CAM) have become increasingly widespread in countries throughout the world in recent years. Alternative medications, including homoeopathic, are now commonly available for purchase from pharmacies, health shops and even supermarkets in South Africa. As a result of the growth in the alternative medicine industry, pharmacists now have a greater responsibility to their patients to understand not only conventional over-the-counter and prescription drugs, but also to give advice regarding the use of dietary supplements and herbal and homoeopathic medicines.

However, pharmacists receive little training of this nature during their formal education and opinions of homoeopathy in this field often range from sceptical to outright cynical. For example, Bennett (2003), in his textbook *Clinical Pharmacology*, describes complementary medical systems as 'cults', '...practices that follow a dogma, tenet or principle based on theories or beliefs of its promulgator to the exclusion of demonstrable evidence'. He goes on to explain that complementary systems of medicine feature a lack of scientific thinking, naive acceptance of hypotheses, uncritical acceptance of causation and a lack of understanding about how therapeutic effects may be measured. When speaking of homoeopathy specifically, he quotes Cuthbert (1982): '...We are asked to put aside the whole edifice of evidence concerning the physical nature of ...normal concentration-response relationships of biologically active substances in order to accommodate homoeopathy...'

Bennett (2003) goes on to highlight the main 'false beliefs' of complementary medicine practitioners, namely that:

- Synthetic, modern drugs are toxic, but products obtained in nature are not
- Traditional (pre-scientific) medicines have special virtue

- Scientific medicine will accept evidence that remedies are effective only where the mechanism of action is understood
- Scientific medicine recognises no other form of evaluation other than strict randomised, controlled trials.

Despite this particular view, the attitudes of doctors, pharmacists and other medical professionals varies widely. Although perhaps sceptical, they do, on the whole, acknowledge the importance to patients and the possible benefits of some alternative and complementary techniques and methods. There is also considerable interest in complementary therapies among nurses, midwives, physiotherapists and other professions allied to medicine (Vincent, 1997).

The growth in alternative medical therapies is as a result of two separate factors, namely 'push' issues that leave individuals dissatisfied with conventional systems of medicine, and 'pull' factors that attract individuals towards a complementary modality, in this case, homoeopathy. According to Kayne (1997), most orthodox health practitioners become interested or involved in homoeopathy in a reactive manner, that is, in response to a growing demand from their patients rather than due to an actual interest in the modality itself.

One of the most common factors that cause people to seek alternative healthcare is the perception that drugs have potential risks and side effects. Drugs often act at sites other than the intended one, whether molecular, cellular or organ. As a consequence they often show undesirable side effects at these other sites, causing the ratio between the dose of drug required for therapeutic action and that which causes unacceptable side effects (the therapeutic ratio) to become an important consideration in drug development (Coulson, 1994).

Furthermore, people who choose complementary medicine may be disillusioned with, or have had bad experiences of conventional medical practitioners, rather than having lost their belief in the actual efficacy of orthodox medicine. Another factor that drives people to seek homoeopathic treatment is the reduced efficacy of orthodox medicines over time. Particularly in chronic cases of disease, for example skin conditions treated with topical steroids, patients find that over time the efficacy of the various ointments

prescribed fails (Kayne, 1997).

There are several 'pull factors' that may attract people to complementary healthcare modalities, in this case homoeopathy. Perhaps the most important of these is the fact that homoeopathy pays attention to all aspects of the person rather than just the symptoms. There is also what is termed the 'Green Association'. This refers to the portrayal of complementary medicines as 'natural' by the media at large, which appeals to the 'green' movement currently in fashion today. Financial reasons also play a role, as homoeopathic medicines in general cost a lot less than average over the counter medications. However, this is obviously offset by the longer consultations and therefore higher fees charged by private homoeopathic practitioners (Kayne, 1997).

It is also generally accepted that people use non-orthodox medicine for cases that conventional medicine finds difficult to treat or cure, such as musculoskeletal disorders, chronic pain, allergic conditions, stress related and psychosomatic complaints. These conditions can be described as chronic rather than acute and disruptive of normal life rather than life-threatening (Sharma,1992). Mayou (1997) admits that there are times when a patient's symptoms remain unexplained even after a medical consultation. He estimates that these account for 25% of general practice consultations and as many as 50% of outpatient clinic attendances.

2.2 The Pharmaceutical Profession

2.2.1 Definition

The Merriam Webster Dictionary (2008) defines pharmacy as '...the art, practice, or profession of preparing, preserving, compounding, and dispensing medical drugs' or '... a place where medicines are compounded or dispensed.' The word has both Latin and Greek roots; from the Latin *pharmacia*, meaning administration of drugs and the Greek word *pharmakeia*, from *pharmakeuein* meaning to administer drugs and *pharmakon* meaning magic charm, poison or drug. A pharmacy is, by law, constantly supervised by a licensed pharmacist (MedicineNet.com; 2008).

The American College of Clinical Pharmacy (ACCP) (2008) has articulated a more detailed definition of clinical pharmacy. It is described as a health science in which pharmacists are responsible for promoting health and wellness, optimizing medication therapy and preventing disease in their patients. The practise of clinical pharmacy combines the knowledge of pharmaceutical science with caring, specialized therapeutic knowledge and experience in order to ensure optimal patient outcomes. Furthermore, the ACCP extends the responsibilities of clinical pharmacists to include contribution towards the generation of new knowledge. This knowledge is needed in order to further the science of both medicine and pharmacy as well as the health and quality of life of others.

The University of the Witwatersrand (Wits) (a) (2007) describes a pharmacist as a natural person specialising in the field of the application and usage of pharmaceuticals. According to the Pharmacy Act (1974), the work of a pharmacist may include the formulation of any medicine for the purpose of registration as a medicine; the distribution of any medicine or scheduled substance; the repackaging of medicines; or the conducting of pharmaceutical research and development and the promotion of public health.

The Pharmacy Act (1974) defines a pharmacist's assistant as a natural person registered as either a:

- (a) pharmacist's assistant (learner basic);
- (b) pharmacist's assistant (basic);
- (c) pharmacist's assistant (learner post-basic);
- (d) pharmacist's assistant (post-basic); or
- (e) pharmacy student.

2.2.2 Principles of Pharmaceutical Action

Pharmacology is defined as the science dealing with the interactions between living body systems and small molecules, particularly those that are chemical in nature and that are introduced from outside the body system (Katzung, 1992). When such interactions are used for the cure or reduction of symptoms of disease, these chemicals

are known as drugs (Smith and Reynard, 1995). These interactions between a drug and biological systems are divided into two classes, namely Pharmacodynamics and Pharmacokinetics.

2.2.2.1 Pharmacodynamics

Pharmacodynamics is defined as the quantitative approach to describing the effects over time of a drug or chemical in the body (Smith and Reynard, 1995). In most cases, these effects result from the association of drugs with specific macromolecules (receptive substance and receptors) in the body, in ways that change their biochemical and biophysical activity (Bourne and Roberts, 1992).

Receptors greatly determine the quantitative relations between dosage of a drug or concentration and its pharmacological effects. The total number of receptors with an affinity for binding a specific drug limits the maximum effect that the drug may produce. Receptors are also largely responsible for the selectivity of a drug's action. Changes in the chemical structure of a drug can dramatically increase or decrease a new drug's affinities for different types of receptors, with resultant differences in therapeutic and toxic effects. Lastly, receptors also allow for the actions of pharmacological antagonists. Antagonistic drug molecules bind directly to receptors without altering receptor function. They work solely to prevent binding of other agonist molecules and blocking their own separate action. This is an important factor in clinical medicine, as many therapeutic drugs are used in this way (Bourne and Roberts, 1992)

2.2.2.2 Pharmacokinetics

Pharmacokinetics describes the effect of the body on drug molecules once they are administered to a patient. This includes absorption, distribution, biotransformation and excretion of the drug. These factors are pivotal in determining the duration and extent of the drug's effect (Dreyer, 1996). In other words, these processes determine how quickly, in what concentration and for how long drug molecules will act at the target organ. Bioavailability, then, is defined as a measure of the speed and completeness of absorption of the therapeutic agent from the most convenient (usually oral) site of administration (Benet, 1992).

This has important consequences for the development of new drugs, for, as Paracelsus is quoted as saying '...The dose alone decides that something is no poison'. Therefore, the development process is necessarily long and experimental. Firstly, there is an initial idea or hypothesis, followed by the design and synthesis of the substance or substances to be tested. These substances are then tested on tissues (in vitro) and live animals (pre-clinical study). These tests are carried out to determine whether and how the drug causes injury, and takes the form of single-dose studies (in order to evaluate acute toxicity) and repeated-dose studies to evaluate chronic toxicity. Once these are completed, clinical studies on human subjects (clinical trials) are begun. On completion, these result in the granting of a license to make therapeutic claims and sell the substance as a medical drug. Thereafter marketing studies and comparisons with other brands are carried out (Bennett, 2003).

2.2.3 Scope of Pharmaceutical Practice

The Pharmacy Council of South Africa (a) (2008) describes several acts and/or services that are regarded as specially pertaining to a licensed pharmacist. Most importantly, a pharmacist must offer pharmaceutical care by taking responsibility for the patient's medicine-related needs and must be accountable for meeting those needs. The pharmacist does this through the evaluation of their patient's medicine related needs by determining the indication, safety and effectiveness of the prescribed or recommended therapy. The pharmacist is also responsible for the dispensing of any medicine or scheduled substance on the prescription of a person authorised to prescribe it, and must provide information and advice to the patient with regard to the use of such medicines.

Furthermore, pharmacists are also ethically responsible for patient compliance with the therapy and follow up to ensure their needs are being met, as well as for the provision of pharmacist-initiated therapy.

The human resources in the pharmaceutical industry are not only limited to licensed pharmacists, however. The Pharmacy Council allows for the registration of four other categories of personnel that are legally entitled to work in a pharmacy setting, albeit with different roles and scopes of practise. These categories include pharmacists' assistant

(Basic), pharmacists' assistant (Post- Basic), pharmacy student and pharmacist intern.

According to the Alberta State Government of the United States (2007), the duties of pharmacists' assistants varies depending on their level of training and work environment (in a hospital or retail environment, for example). However, their general tasks include:

- Ensuring proper storage and security conditions for medications
- Entering patient information and prescriptions into the pharmacy computer system
- Preparing, labelling and packing of these prescription medications
- Maintaining inventory systems, including possibly placing and receiving stock orders to maintain the inventory
- Preparing compounds

In a retail pharmacy setting particularly, pharmacists' assistants may also have to perform such duties such as:

- Assisting customers with front shop products
- Accepting payment for prescriptions
- Pricing stock
- Answering customer queries about non-drug products
- Answering telephone calls
- Preparing and reconciling insurance claims and records.

In South Africa, all categories of pharmacists' assistants are only authorised to carry out their duties under the direct supervision of a qualified pharmacist. The scope of practise of Pharmacists' Assistant (Basic), according to the Pharmacy Council of South Africa (a) (2008) includes the selling of schedule 1 medicines, assisting with the compounding or preparation of non-sterile medications according to a Standard Operating Procedure approved by the responsible pharmacist, re-packaging of medicines, control of stock of Schedule 1 up to Schedule 5 medicines and providing information to customers in order to promote health.

Individuals who hold the qualification Pharmacist's Assistant (Post-Basic) are entitled, in addition to the actions listed above, to order scheduled medicines up to and including Schedule 6, according to the instructions of a registered pharmacist. Also, they are able to read, prepare, select, manipulate, compound and label medicines after the interpretation and evaluation of the prescription by a pharmacist. Furthermore, they may then provide patients with instructions regarding the correct use of the medicines prescribed.

A student who has completed the second year of study for the degree of pharmacy is authorised to provide all the services relevant to the scope of practise of an individual registered in the category pharmacist's assistant (Post-Basic) under direct, personal supervision of a qualified pharmacist. In addition, for the purposes of training, and under the direct supervision of a provider qualified to offer education and training for a qualification in pharmacy, a student may perform all acts pertaining to the scope of practise of pharmacist (Pharmacy Council (a), 2008).

A pharmacist intern may also perform all the services pertaining to the scope of practise of the pharmacist's assistant (Post-Basic) qualification, again under the personal supervision of a qualified pharmacist. Therefore, interns are able to gain experience working as pharmacists' assistants in pharmacies other than the one in which their training is taking place. This provision allows new pharmacists to broaden their experience of the different responsibilities which will form part of their scope of practise (KZN Health Department, 2008).

2.2.4 Pharmaceutical Training and Qualification in South Africa

The education and training of pharmacy professionals in South Africa is regulated by the South African Pharmacy Council. The main purpose of the Council is to control and promote pharmaceutical education and pharmacy practice in South Africa and to establish and maintain acceptable standards with regards to education and pharmacy practice. The qualification consists of four years of full time study leading to the awarding of a Bachelor of Pharmacy (BPharm) degree, followed by a one year pre-registration practical internship. This may be carried out in an institutional, community or manufacturing pharmacy. Following this period, the individual is evaluated and

registered as a pharmacist, but must complete one year of service in a public sector facility before being able to practise independently (Pharmacy Council of South Africa (b), 2008).

Currently, there are seven universities approved by the South African Pharmacy Council that offer the Bachelor of Pharmacy degree. These include:

- Nelson Mandela Metropolitan University
- North-West University
- Rhodes University
- University of Kwazulu-Natal
- University of Limpopo (Medunsa and Turfloop Campuses)
- University of the Western Cape
- University of the Witwatersrand.

Subjects of study during the four year pharmacy degree include Biology, Physics, Chemistry, Mathematics, Anatomy, Physiology, Biochemistry, Pharmaceutics, Pathology, Pharmacology and Pharmacotherapy. Further modules are completed in Medicinal Chemistry, Pharmacy Practice and Emergency Medical Assistance (Wits (b), 2007).

Very little to no emphasis is placed on homoeopathy or alternative healing modalities at the degree level. This lack of training is obviously detrimental to both patients and pharmacists themselves, and is illustrated in a survey carried out by Vincent and Furnham (1997). Of those people who asked a health professional for help regarding homoeopathic medications, more people asked their pharmacist than all other professionals added together. In another study carried out by Davies and Kayne (1992), although 96% of pharmacists in a localised area of central England had heard about homoeopathy, most were unable even to identify the main features of the discipline.

Qualification as a pharmacists' assistant is obtained through a national certificate after completion of an outcomes based course. Students may achieve two qualifications, namely Basic Level Pharmacists' Assistant and Post-Basic Pharmacists' Assistant (Medunsa; 2007).

2.2.5 Pharmaceutical Statistics in South Africa

The Health Products Association (2004) reports that the complementary health care industry is growing at an annual rate of 18% in South Africa, with homoeopathy making up 5% of this figure.

The Health Systems Trust (2007) reports that the pharmacist/ population ratio in South Africa is one pharmacist for every 3 752 people. This is less than the World Health Organisation average for industrialised countries of one pharmacist for 2 300 people. Furthermore, the sector distribution of pharmacists indicates that only 26% of pharmacists are employed in the public sector, including those in academic and administrative positions. This distribution is unsatisfactory, as more or less 80% of the population is served in the public sector. The pharmacy distribution indicates that, of the 3 627 pharmacies registered in South Africa, 74% are retail pharmacies. Although less than 20% of the population is located in Gauteng, 36% of retail pharmacies are situated in this province.

In 2007, there were 11 547 fully qualified pharmacists registered with the South African Pharmacy Council. Of those, only 1 830 were employed as part of the public sector (15.84%) (Health Systems Trust, 2007). The majority of pharmacists (4 470) are registered in Gauteng, followed by the Western Cape (1 977), and Kwazulu Natal (1738). The least serviced province is the Northern Cape with only 126 pharmacists registered there.

2.2.6 The Medical Aid System in South Africa

There are approximately 160 medical aid schemes currently listed in South Africa. These schemes have more or less 7 million beneficiaries, which is less than 15% of South Africa's total population. This means that the vast majority of people in South Africa are dependent on the public sector for their health care needs. Only a small proportion of medical funds are open to the general public - approximately 40 out of the total 160 schemes. This number is continually decreasing as larger funds take over the smaller ones (Council for Medical Schemes, 2008).

2.2.6.1 Prescribed Minimum Benefits

Prescribed Minimum Benefits (PMB) are minimum benefits which must be provided to all medical scheme members by law. These minimum benefits include the diagnosis, treatment and care costs for any emergency medical condition, as well as approximately 270 conditions specified in Annexure A of the Regulations to the Medical Schemes Act (No. 131 of 1998). A further 26 chronic conditions have also been included as prescribed minimum benefits, in a bid by government to prevent medical aid schemes from overrating the risk profile of members with these conditions, thereby forcing them to pay higher fees for medical cover. The conditions listed on the chronic illnesses list include: Addison's Disease, asthma, bipolar mood disorder, bronchiectasis, cardiac failure, cardiomyopathy disease, chronic renal disease, coronary artery disease, Crohn's disease, chronic obstructive pulmonary disorder, diabetes insipidus, diabetes mellitus type 1 & 2, dysrhythmias, epilepsy, glaucoma, haemophilia, HIV/AIDS, hyperlipidaemia, hypertension, hypothyroidism, multiple sclerosis, Parkinson's disease, rheumatoid arthritis, schizophrenia, systemic lupus erythematosus, and ulcerative colitis (Board of Healthcare Funders of Southern Africa, 2008).

A Designated Service Provider (DSP) is a healthcare provider (doctor, pharmacist, hospital) that is a medical aid scheme's first choice for treatment for a PMB. If a member decides not to use the recommended DSP, they may have to pay for a portion of their treatment, provided the medical scheme has ensured the provider is within a reasonably close distance to the member's home or place of work (Board of Healthcare Funders of Southern Africa, 2008).

At present, homoeopathy is not a treatment option for medical aid scheme members with regards to Prescribed Minimum Benefits and homoeopaths are not considered for registration as Designated Service Providers.

2.3 Homoeopathy and Homoeopathic Pharmacy

2.3.1 Definition

Homoeopathy began in Germany in the late eighteenth century and was developed by Dr. Samuel Hahnemann, a physician of the time (Cook, 1981). He was highly dissatisfied with the practice of medicine at the time and wrote in a letter published in the British Journal of Homoeopathy in 1808 that he '*...could not conscientiously treat the unknown morbid conditions of my suffering brethren by these unknown medicines, which being very active substances...so easily can occasion death, or produce new affections and chronic maladies*' (Bradford, 2004).

Hahnemann (2001 edition) defines homoeopathy as a system of medicine based primarily on the principle of 'like cures like'. He further explains that in order to affect a mild, rapid and permanent cure, a medicine must be chosen which can '*...of itself produce an affection similar to that it is wished to cure*'. Unlike conventional medicine, homoeopathy deals with drug energy, not with drug material (Boericke, 1994).

Homoeopathic pharmacy is defined by Banerjee (1999) as the '*...art and science of collecting, compounding, combining, preparing, preserving and standardising of drugs and medicines from vegetable, mineral, animal as well as physiological and morbid sources*'. These phases of drug preparation are completed according to a Homoeopathic Pharmacopoeia, which originates from two Greek words: *Pharmakon*, meaning a drug, and *poieo*, meaning to make. This standard book contains a list of drugs and medicines, with information on the above mentioned aspects for each drug.

Homoeopathic pharmacy is further divided into two branches, namely Galenical pharmacy and Pharmacy Proper. Galenical pharmacy refers to pharmacy that follows the methods and theories of Galen, a 2nd century Greek physician. This branch of pharmacy relates only to crude drugs. Pharmacy Proper includes Official pharmacy, which includes the preparation of drugs and medicines according to the official pharmacopoeias, and Extemporaneous pharmacy, which involves the preparation and distribution of medicines according to the prescriptions of physicians (Banerjee, 1999).

The history of homoeopathic pharmacy is closely linked to that of homoeopathy itself. The practical and experimental foundations of this new science were carried out between 1790 and 1810. Homoeopathic medicines are traditionally prepared by the homoeopathic physician himself and it was only in 1825 that Dr. C. Caspari established the first homoeopathic dispensary with an accompanying pharmacopoeia (Banerjee, 1999).

2.3.2 History of Homoeopathy

Homoeopathy was developed in the early 1800's by a German doctor, Samuel Hahnemann. Soon after opening his medical practice, he became disillusioned with the allopathic profession of his time and turned instead to the translation of medical texts to earn a living. Despite this, he still aimed to discover whether, in his own words, '...if God had not indeed given some law, whereby the diseases of mankind would be cured' (Panos and Heimlich, 1983).

It was while translating *Lectures on the Materia Medica* by William Cullen, a Scottish medical professor, that he began to develop theories that later formed the foundation of homoeopathy. Cullen claimed that chinchona bark, or quinine, cured intermittent fever (specifically malaria) due to its bitter qualities. Hahnemann was sceptical of this view, as many other substances of equal bitterness had no effect whatsoever on fever. He therefore tested quinine by taking it himself, and found that he developed symptoms similar in nature to those of malaria. He also found that, as soon as he discontinued taking quinine, he once again felt perfectly healthy. This experiment became Hahnemann's first proving of a homoeopathic remedy. At his death at age eighty eight, he had undertaken or supervised the provings on over ninety nine different substances (Panos and Heimlich, 1983).

Although homoeopathy had its roots in Germany, by 1825 it had spread to the United States, where it soon gained widespread popularity and acceptance. Homoeopathic medical training was recognized as the equal of allopathic medicine, and both sides were treated equally under both federal and state law. As late as 1938 the Food, Drug and Cosmetic Act recognized the *United States Homoeopathic Pharmacopoeia* as the legal equivalent of the *United States Pharmacopoeia*, which contains the standards of

preparation of allopathic medicines (Coulter, 1980). However, this is not the case today. Homoeopathic medical schools and licensing boards have been outlawed, and so modern homoeopaths in America must undergo conventional medical training and receive the same certifications as all other physicians.

Many other countries have in recent years taken steps to increase the legal status of homoeopathy. In England, for example, Parliament adopted the Faculty of Homoeopathy Act in 1950, which incorporated the Faculty of the London Homoeopathic Hospital and allowed it to issue certificates of competence in homoeopathy. The National Health Service also reimburses medically qualified homoeopaths for homeopathic practice (Coulter, 1980).

2.3.3 Principles of Homoeopathic Medicine

Hahnemann states in his *Organon of Medicine* (2001 edition) that '...the physician's high and *only* mission is to restore the sick to health, to cure, as it is termed'. He goes on to say that ...'the highest ideal of cure is rapid, gentle and permanent restoration of the health, or removal and annihilation of the disease in its whole extent, in the shortest, most reliable, and most harmless way, on easily comprehensible principles'. These principles are clearly described in a series of laws or rules governing homoeopathic diagnosis and prescribing.

2.3.3.1 The Law of Similars

This law is based on the principle of 'like cures like', in other words, that the remedy given in each case of illness is that substance which gives rise to the same set of symptoms when administered to a healthy individual (Coulter, 1980).

2.3.3.2 The Law of Proving

The curative powers of homoeopathic remedies are therefore discovered by recording the symptoms of poisoning as well as administering them in very small quantities to healthy persons over a period of time (weeks to months). This is termed a 'proving' of a homoeopathic medicine, after the German word *Prufung*, meaning test or trial. The

theory behind this principle is that a patient's symptoms are a sign of the body attempting to heal itself and the medicine which generates the same symptoms is the one necessary in order to stimulate total cure (Coulter, 1980).

2.3.3.3 The Single Remedy

It is considered 'better' homoeopathy to prescribe only one remedy at a time. By finding the remedy that completely matches the patient's symptom picture, the practitioner prescribes the one remedy that meets the needs of the patient's whole organism. This makes the use of more than one remedy redundant when the true art of homoeopathy is employed (Coulter, 1980). Homoeopathy is therefore a totally holistic therapeutic modality. The use of a single remedy also prevents confusion and complications when evaluating a patient's response to treatment.

2.3.3.4 The Law of Potentization or the Minimum Dose

This law states that the minimum dose of a remedy will enable cure without a severe aggravation of the patient's symptoms and that homoeopathic remedies have more power with greater dilution (Coulter, 1980). Hahnemann first began using remedies in conventional doses, but found that when prescribing according to the Law of Similars, there followed an aggravation of the symptoms and hence insisted on the use of minimum doses (Boericke, 1994). Each homoeopathic remedy is prepared by a standardized process of successive dilution and succussion (shaking) of the therapeutic substance, which is often continued to a point where no molecules of the original material are left in the solution. These minute doses are known as potencies; the smaller the dilution, the lower the potency and vice versa. Remedies with higher dilutions or potencies are seen to have a greater therapeutic effect (Panos and Heimlich, 1983).

The very high dilution of homoeopathic remedies has often caused critics to dismiss their success as merely a result of the placebo effect. One model of the placebo effect developed by Claridge in 1970 suggests that the 'total drug effect' on an individual depends on a number of factors separate from its actual pharmacological action. This includes the following:

- the drug itself, such as its colour, shape, brand name and price,
- the prescriber, including their attitudes, beliefs, and self-confidence,
- the patient, including their suggestibility, intelligence and personality and
- the setting of the drug ingestion, such as at the patient's home, in a clinic or hospital (Helman, 2001).

It was only with the discovery in the twentieth century of hormones and other substances that are effective in microscopically small quantities that allopathy began, to an extent, to stop the outright ridicule of homoeopathic dilutions (Helman, 2001).

2.3.3.5 Hering's Law of Cure

This concept was introduced to Hahnemann's original theories by the American homoeopath, Constantine Hering. This law states that under correct, curative treatment, symptoms of a disease will move from more vital to less vital organs, from the upper parts of the body to the lower parts, and from within outwards (that is, from the interior towards the skin). The symptoms will also disappear in reverse order of appearance. The opposite is also true for the worsening of a disease. It is thought that suppression of a symptom by medication may cause the illness to move in the opposite direction to cure and cause an incurable chronic disease in the patient (Muller, 2001).

2.3.3.6 The Vital Force

In aphorisms 9 and 10 of the Organon of Medicine (2001 edition), Hahnemann describes the spiritual or life giving force in man as follows: '...the spiritual vital force..the dynamis that animates the material body (organism), rules with unbounded sway, and retains all the parts of the organism in admirable, harmonious, vital operation, as regards both sensations and functions, so that our indwelling, reason-gifted mind can freely employ this living, healthy instrument for the higher purpose of our existence.' He goes on to explain that the material organism, without the vital force, is capable of no sensation, no function, no self preservation, it derives all sensation and performs all the functions of life solely by means of the vital force.'

In homoeopathic theory, it is believed that this vital force is responsible for curing

disease. The homoeopath aims to give this force an impulse in the exact direction necessary for cure, by administering the exact correct remedy according to the Law of Similars. The vital force then continues to cure until no further progress is possible, whereupon the physician attempts to continue to stimulate this process by repetition of the remedy or administration of a new remedy fitting the new symptom picture (Hubbard, 1990).

2.3.3.7 Homoeopathic Polypharmacy

In the Organon of Medicine (2001 edition), Hahnemann discusses the issue of polypharmacy, in other words, the use of more than one remedy at a time. In aphorisms 272 to 274, he categorically dismisses this form of homoeopathic prescribing, saying that '...it is wrong to attempt to employ complex means when simple means suffice'. He goes on to say that '...It is not conceivable how the slightest dubeity could exist as to whether it was more consistent with nature and more rational to prescribe a single, well-known medicine at one time in a disease or a mixture of several, differently acting drugs. It is simply not allowed in homoeopathy, the one true, simple and natural art of healing, to give the patient *at one time* two different medicinal substances'.

Despite this entirely unambiguous view by the very founder of the science of homoeopathy, there were several proponents of polypharmacy during Hahnemann's time. In the Quarterly Homoeopathic Journal of 1849, Dr. L. Griesselich writes of a pioneering homoeopath by the name of Julius Aegidi, who proposed to Hahnemann the method of administering a mixture of two highly potentized remedies, each relevant to different parts of the same disease. He believed that in the potentized state these medicines would be incapable of reacting with one another, but would rather remain separate within their own sphere of action. Hahnemann felt that this would lead to a regression towards the polypharmacy of the old school and excluded this method of administration from his new editions of the Organon. Aegidi also renounced this method in 1857 (Bradford, 2002).

However, the practice of polypharmacy is still very common, and perhaps even more popular today than the preferred method of prescribing single remedies combined with the 'watch and wait' principle that is classical homoeopathy. This is possibly due to

several modern factors, such as lack of time for classical consultations, ease of obtaining premixed homoeopathic remedies that treat a wide range of illnesses as well as a lack of suitably expert practitioners who are able to accurately decide on the appropriate single remedy in individual cases.

2.3.4 The Sale of Homoeopathic Medicines in South Africa

There are several rules and regulations as legislated by government governing the sale of homoeopathic and related medicines in South Africa. According to Government Notice No. R. 1746 (1983), a homoeopathic practitioner is entitled to personally compound, dispense or supply remedies or substances which are prescribed by himself, or another practitioner with whom he is in partnership or associated with as a principal or assistant or *locum tenens*. This is provided such remedies are to be used by a patient of said practitioners provided that they do not have an open shop or pharmacy. This is now also subject to the provisions of the Medicines and Related Substances Control Act 101 of 1965, which states that only holders of a Compounding and Dispensing License will be certified to compound their own medications. Furthermore, a practitioner may not manufacture, prepare, store or display any medicines or remedies in areas of his consulting rooms used for consultation, examination and treatment of patients or waiting room areas.

The following medicines fall within the scope of practice of registered homoeopaths and may therefore be prescribed, compounded and dispensed by them:

- Homoeopathic substances listed with the Medicines Control Council (MCC)
- All products listed by the MCC as Homoeopathic Medicine
- Heel products
- Dr. Reckeweg products
- Natura homoeopathic products
- W. Last homoeopathic products
- Pharmanatura/ Weleda homoeopathic products
- A. White Pharmacy's homoeopathic products
- All other homoeopathic products from any company not mentioned above (Homoeopathic Association of South Africa, 2008).

According to the Medicines and Related Substances Control Act (1965), a registered homoeopathic practitioner has the right, for the purposes of his or her practice, to be in possession of any homoeopathic substances, substances that are not scheduled and substances that are used as starting substances in the preparation, formulation, compounding and dispensing of homoeopathic medicines. This includes scheduled substances, their derivatives and salts which are recorded in the homoeopathic pharmacopoeia or other standard homoeopathic text, provided they are in reasonable concentrations or quantities necessary for their purpose. Homoeopaths may also legally be in possession of certain regulated substances, for example, adrenaline, alkaloids, aconite tincture, belladonna tincture, gelsemium tincture, ipecacuanha tincture and veratrum tincture. Other substances such as cocaine, arsenic, corticosteroids, hormones, lithium, mercury, nicotinic acid, nitroglycerine and opium are also permissible, provided they contain no more than one part per thousand thereof. Practitioners may also have in their possession any homoeopathic substance as well as those listed above and water in an injectable form (Medicines and Related Substances Control Act, 1965).

Registered homoeopathic practitioners may also, according to the Medicines and Related Substances Control Act (1965) prescribe for or supply a patient with any homoeopathic substances, vitamins, unscheduled minerals, substances or mixtures of substances that are not scheduled substances, as well as scheduled substances provided the specified dose is not exceeded. For example:

- Adrenaline (epinephrine): not more than 5 micrograms per daily dose
- Antimicrobial substances: not more than one part per thousand of the relevant daily allopathic dose
- Antimony potassium tartrate and antimony sodium tartrate: not more than 5 milligrams per daily dose
- Arsenic: not more than 0.5 micrograms of arsenic per daily dose
- Belladonna tincture: not more than 0.1 millilitre per daily dose
- Zinc salts: not more than 200 micrograms per daily dose

With regards to the sale of homoeopathic medications in a retail environment, the Act states that any Schedule 0 substance may be sold in an open shop or pharmacy.

Therefore, since homoeopathic over-the-counter medications are not scheduled, it is possible for them to be sold by any individual regardless of qualification or training. Schedule 1 substances may only be sold by a practitioner, nurse or person registered under the Health Professions Act (included homoeopathic practitioners). Schedule 2,3,4,5, and Schedule 6 substances may only be sold by a registered pharmacist, pharmacist intern or pharmacist's assistant acting under the supervision of a pharmacist and of these latter only schedule 2 substances may be sold without a prescription.

2.3.5 Homoeopathic Training and Qualification in South Africa

Registration as a homoeopath in South Africa affords practitioners much the same privileges, rights and obligations to those of allopathic medical professionals. Only full time courses at the Masters Degree level are offered and no distance learning or correspondence courses are considered for registration in South Africa. Registration with the Allied Health Professions Council of South Africa (AHPCSA) is mandatory (Prinsloo, 2006).

The qualification of Masters Degree in Technology (Homoeopathy) is a five year, full time course with an undergraduate and postgraduate component. Years one to four comprise the undergraduate element. Subjects during this time include physics, chemistry, social studies, anatomy, physiology, biology, homoeopathic philosophy, biochemistry, medical microbiology, epidemiology, diagnostics, psychopathology, general and systemic pathology, radiographic anatomy, auxiliary therapeutics, clinical homoeopathy, homoeopharmaceutics, materia medica and research methods and techniques. At the postgraduate level, subjects covered include practice management and jurisprudence, clinical homoeopathy, materia medica as well as a research project and dissertation. Practical patient exposure begins from the third year of study, and a certain number of hours spent working in a clinic environment under supervision are required in order to complete the specified training programme (University of Johannesburg, 2008).

There are only two institutions in South Africa offering the recognized course at this time, namely the University of Johannesburg and the Durban University of Technology. Most international schools of homoeopathy offer only skills oriented training, whereas

the South African qualification offers professional training at a level consistent with the scope of practice of homoeopaths in this country - namely as primary contact health care professionals. Therefore, the vast majority of international part time or correspondence qualifications are not recognised by the AHPCSA. For medical practitioners already registered with the Health Professions Council of South Africa who would like to extend their practice to include homoeopathy, there is a specialized course available from the South African Faculty of Homoeopathy (Prinsloo, 2006).

2.3.6 Scope of Homoeopathic Practice

The scope of practice for homoeopathic practitioners is governed by the Allied Health Professions Act of 1982. The Act defines a 'practitioner' as a person registered as an acupuncturist, ayurveda practitioner, chiropractor, homoeopath, naturopath, osteopath or phytotherapist. In terms of the Act, a practitioner may diagnose, treat or prevent physical and mental disease, illness or deficiencies in humans; prescribe or dispense medicines, or provide and prescribe treatment for such disease, illness or deficiencies in humans. Registration with the Allied Health Professions Council confers the right upon a practitioner to practise for monetary gain each profession for which he is registered and to perform for gain any of the acts specially pertaining to each profession, as well as to indicate each on his nameplate or in any other manner prescribed.

Government Notice No. R.2610 (1982) further describes acts pertaining specifically to the profession of homoeopathy. These include the physical examination of any person, taking into account the totality of symptoms, modalities and peculiarities thereof, for the purpose of diagnosis, as well as the treatment or prevention of any physical defect by remedies, dietary advice or dietary supplementation based on homoeopathic principles.

According to Government Notice No. R. 1746 (1983), a practitioner may not, except in emergencies, perform a professional act which does not pertain to his or her specific profession, or for which he has insufficient training, or outside his or her consulting rooms, except with prior written consent of the Allied Health Professions Council.

In the United Kingdom and Ireland there is no official regulation of alternative healthcare practitioners who are not medically qualified. They are allowed to practice relatively

freely, subject to a few minor limitations. In most of the European Union, including Italy, Greece, Spain, France and Belgium, the practice of any form of medicine, except by registered health professionals, is illegal. The Dutch government will only prosecute non-medically qualified individuals who practice an alternative modality in cases of malpractice. In Denmark non-registered practitioners may practice, but the scope of this is restricted by legislation. Germany introduced a health practitioner system in 1938 whereby it licenses practitioners of non recognized modalities provided they pass an examination proving basic medical knowledge and are registered. These practitioners are specifically prohibited from practicing obstetrics, dentistry and venereology (Vincent and Furnham, 1997).

2.3.7 Homoeopathy and the Medical Aid System in South Africa

According to Natura Homoeopathic Laboratories (2008), most medical aid funds will reimburse members for homoeopathic treatment when prescribed by a registered, licensed homoeopath. Increasingly, medical aids are also making allowances for homoeopathic self medications too.

The Department of Health (2007) has issued a reference price list for services by homoeopaths, the purpose of which is to serve as a guideline against which medical aid schemes and homoeopaths can individually determine benefit levels and their fees. This reference price list includes general information which practitioners must include when they or their patients wish to claim for treatment, as well as definitions for consultations, medicines, consumables and disposables which may or may not be claimed from a medical aid fund.

2.4 Previous Research

Several similar studies have been carried out in countries such as North America and the United Kingdom. For example, a survey on attitudes and knowledge of natural products of 551 pharmacists conducted in Missouri found that 56.9% of respondents received questions from customers about alternative products on a weekly basis, with the vast majority being asked questions at least monthly. However, only 2.4% of respondents said that they were 'always able to answer natural product questions'. Also

of concern was the 4.3% of pharmacists who rated the issue of medicine interaction as 'not important' (Clauson *et al*, 2003).

In another study carried out amongst British pharmacology students, it was found that 43% of students had personally used at least one type of alternative therapy during the 12 months prior to the study. Also, the researchers found that there was a widespread interest in alternative medicine within this group (Freymann *et al*, 2006). In a similar study conducted on the staff on the Medical and Dental University of New Jersey, researchers concluded that 22.1% of faculty members recommend herbal medication, and that personal users of herbal medicine are more likely to include alternative medication in their coursework (Dougherty *et al*, 2000).

Researchers from the South University School of Pharmacy in the United States found that, after completing a course on complementary and alternative medicine, over 50% of students had changes in their attitudes and personal beliefs towards the subject (Evans and Evans, 2006).

In a pilot study undertaken by Alton & Kayne (1992), a random sample of patients attending one of three pharmacies in the Greater Manchester area completed a questionnaire regarding their attitudes and awareness of homoeopathy. Seventy eight percent of respondents had some degree of knowledge of homoeopathy, and there was no significant difference in attitude between those that had used homoeopathy and those who had not. The biggest proportion of those surveyed claimed to get their information from friends, relatives or the media.

A similar study conducted on 81 medical students and 163 non medical students, found that both did not differentiate between conventional complementary therapies such as physiotherapy and less accepted modalities such as yoga. They also grouped less traditional treatments such as homoeopathy and acupuncture with treatments such as physiotherapy and prescribed diets. Both groups of students were also found to be unconcerned with the scientific validity of complementary therapies (Yardley & Furnham, 1999).

Davies and Kayne (1992) conducted a similar study on the attitude toward

homoeopathy of a sample of pharmacists, technicians, and unqualified individuals working in a pharmacy environment in the Stoke-on-Trent area in England. Significantly, the majority of those surveyed were in favour of homoeopathy, but unfortunately had little understanding of the principles involved. Most were unable to identify the main features of the discipline. For example, 77% of pharmacists felt that homoeopathy worked because 'people have faith in it', 60% of pharmacist assistants said that it works because it 'contains herbal ingredients' and only 25% of the entire group felt that it was due to the 'like cures like' concept of homoeopathy. No one answered that it worked due to the preparation method of homoeopathic medicines (i.e. dilution and succussion) and no pharmacists felt that it worked due to the very small dose involved.

Awareness of homoeopathy in the UK compares favourably with that of the USA, however. In a study undertaken by Nelson *et al* (1990), 86.4% of a sample of 434 British pharmacists answered that they knew 'something' about homoeopathy, as opposed to only 55.8% of their American colleagues (n=197). This may not be a fair reflection however, due to the mere 19.7% response rate of the American survey, as opposed to that of 63% in the UK. Significantly, although chiropractic and osteopathy are the most popular complementary modalities in both countries, acupuncture was listed as the most helpful alternative treatment by the majority of respondents from both countries.

Selli (2004) conducted similar research on the attitudes of medical practitioners to complementary medicine in South Africa, and a further study regarding the public's perception of homoeopathy is currently being completed at the University of Johannesburg. Tatalias (2006) completed a pilot study on the level of knowledge of homoeopathy among staff in health shops in the Gauteng area through the Durban University of Technology. It was found that health shop staff have a high level of knowledge of homoeopathy, although this knowledge is mostly factual and superficial in nature. Very few participants in the study possessed in-depth knowledge of the principles of homoeopathy.

However, no research has been done on the attitudes of pharmacists towards homoeopathy in South Africa.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 The Sample Population

The study population consisted of qualified pharmacists and pharmacy assistants in the Greater Johannesburg area. According to the Pharmacy Council of South Africa (2008), there are approximately 1000 pharmacies registered in Greater Johannesburg.

In order to participate in this research, participants had to be both:

1. Fully qualified and registered as either a pharmacist or pharmacy assistant, and
2. Working in a retail pharmacy environment in the Greater Johannesburg area.

Participants were excluded if they were:

- Working in a hospital or clinic pharmacy. Hospital and clinic pharmacies have been excluded from this survey, as only a small proportion of homoeopathic and alternative medications are sold in these establishments.

3.2 The Sample

The number of participants in the survey was set at 50, and this number in turn was divided between pharmacists and pharmacy assistants, as well as between large, chain pharmacies and smaller, privately owned pharmacies. The Greater Johannesburg area was then divided into East, West, North and South and the number of surveys were divided between these areas. The majority of respondents answered all the questions included in the survey.

3.3 Data Collection

This survey study was conducted in the form of a written questionnaire (Appendix A).

Participants were required to complete the survey by hand.

The smaller, privately owned pharmacies were randomly chosen using an internet search engine based on the area in which they were situated. The responsible pharmacist at each pharmacy was contacted by phone and requested to participate. The relevant number of surveys was then dropped off with the responsible pharmacist, who then supervised the completion of the questionnaire by his or her staff members.

A single large pharmacy chain, with several branches was approached to participate in this survey. Individual sample selection was arranged through the regional responsible pharmacist, who randomly distributed the questionnaire among the required staff members at the necessary branch locations.

The questionnaire consisted of Likert scales and simple yes/ no type questions in order to obtain the necessary information. The questionnaire required the participant to include the name of the pharmacy at which they work for ease of data collection only. This information was not included in the statistical data that was then analysed, therefore the study was entirely anonymous.

The questionnaire (Appendix A) required the pharmacists and pharmacist assistants to answer a series of short questions relating to the following:

- Age, gender and race
- Area in which the pharmacy is situated
- Qualifications, year of qualification
- Years of experience in a retail pharmacy setting
- Extent of training received on alternative and Homoeopathic medicines during formal studies
- Level of interest in and perceived need for both formal and informal training (e.g. by Homoeopathic pharmaceutical companies)
- Personal experiences of Homoeopathic treatment and medication
- Perceptions of Homoeopathy with regards to commonly held ideas and myths
- Exposure to Homoeopathic medications in the workplace

- Level of confidence in giving advice on Homoeopathic medicines, as well as how frequently the need to give such advice arises
- Beliefs about why customers may or may not prefer Homoeopathic medications
- The importance of Homoeopathic sales with regards to profit within their particular pharmacy
- Whether or not Homoeopathy should be an option in Prescribed Minimum Benefits

3.4 Data Analysis

This study was a quantitative, descriptive statistical study. All the questions were closed-ended, providing basic descriptive information. The data collected was analysed using frequencies and percentages. Statistically significant p-values were calculated using the Fisher's exact test. The information was presented graphically in order to depict simple quantitative data.



CHAPTER 4

RESULTS

4.1 Introduction

The following chapter describes the results of the written pharmacist and pharmacists' assistant survey undertaken between 25 October 2007 and 16 January 2008. The survey questionnaire aimed to investigate the personal and professional views and knowledge of homoeopathy among this group of people.

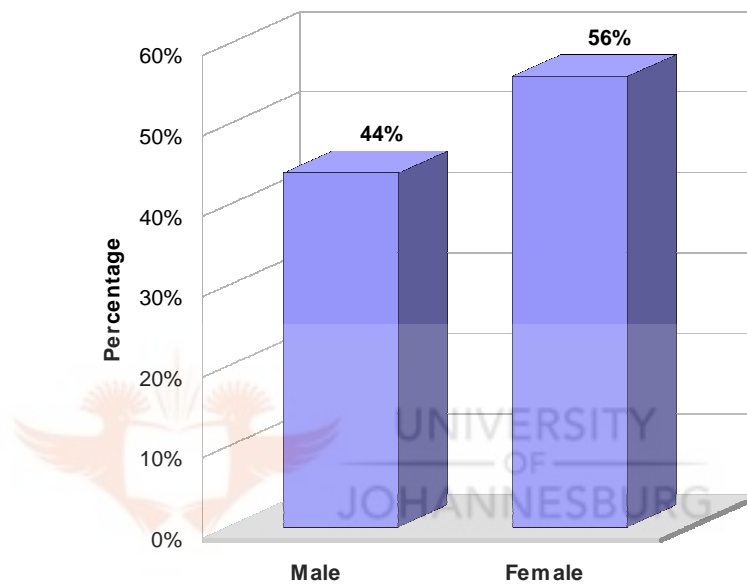
The study population consisted only of qualified pharmacists and pharmacy assistants working in Greater Johannesburg in a retail pharmacy environment. In order to ensure a study sample that was representative of all areas and work environments, participants were recruited from both small, privately run and larger chainstore pharmacies, as well as from northern, southern, eastern and western areas of Johannesburg. This resulted in a study sample of 50 pharmacists and pharmacy assistants from throughout the Greater Johannesburg area - more specifically 23 assistants and 27 fully qualified pharmacists. Of these, 23 participants worked in large, corporate style pharmacies, and 27 worked in smaller, owner run businesses. The questionnaire required only 'one word' or 'tick the block' type responses from participants, as a result of the time pressures that the retail pharmaceutical profession presents. The participants were invited telephonically to take part in the survey, whereafter a copy of the questionnaire was delivered to them at their place of work for completion. The majority of respondents answered all the questions contained in the questionnaire.

The results indicated that in some respects there are differences of opinion between pharmacists and pharmacy assistants with regard to issues surrounding homoeopathy, as well as between people who have been qualified for different lengths of time. The results reflect a general trend toward an acceptance and interest in homoeopathy among this group overall, and the majority of respondents were positive in their responses. There was little statistical difference between the answers given by male and female participants, or participants of different racial groups.

4.2 Demographic Statistics of Respondents

4.2.1 Gender

50 surveys were completed. Figure 4.1 illustrates the gender representation of these respondents; 56% were female (N=28) and 44% were male (N=22).

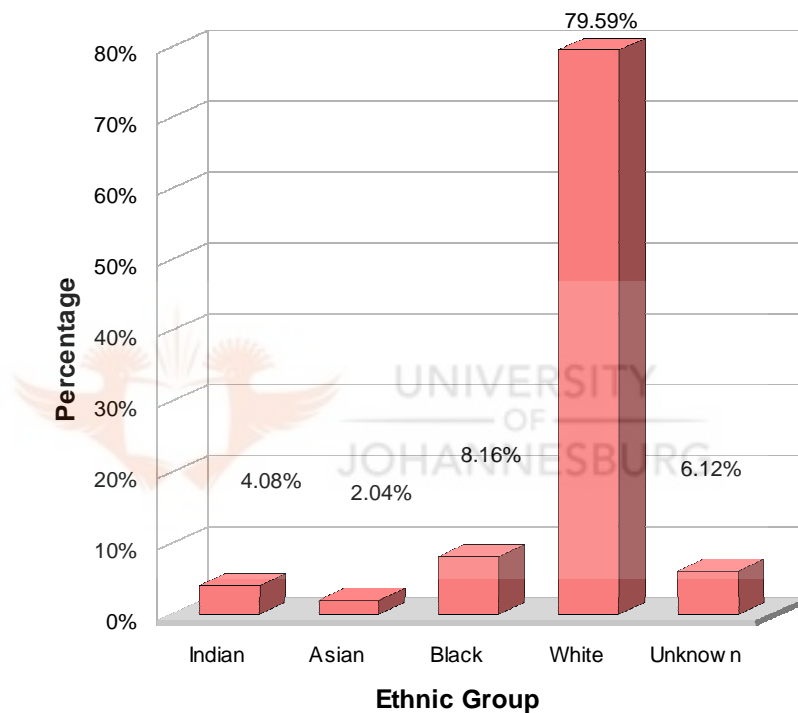


(N=50)

Figure 4.1: Gender Representation of Survey Participants

4.2.2 Race

Figure 4.2 shows the representation of race by participants. The majority (79.5%) of those surveyed were white (N=39), followed by black respondents (8% or N=4) and 6.12% (N=3) respondents of unknown ethnicity, who described themselves only as 'South African'. Two participants (4.08%) were Indian, 2.04% (N=1) were Asian and 1 respondent failed to answer the question.

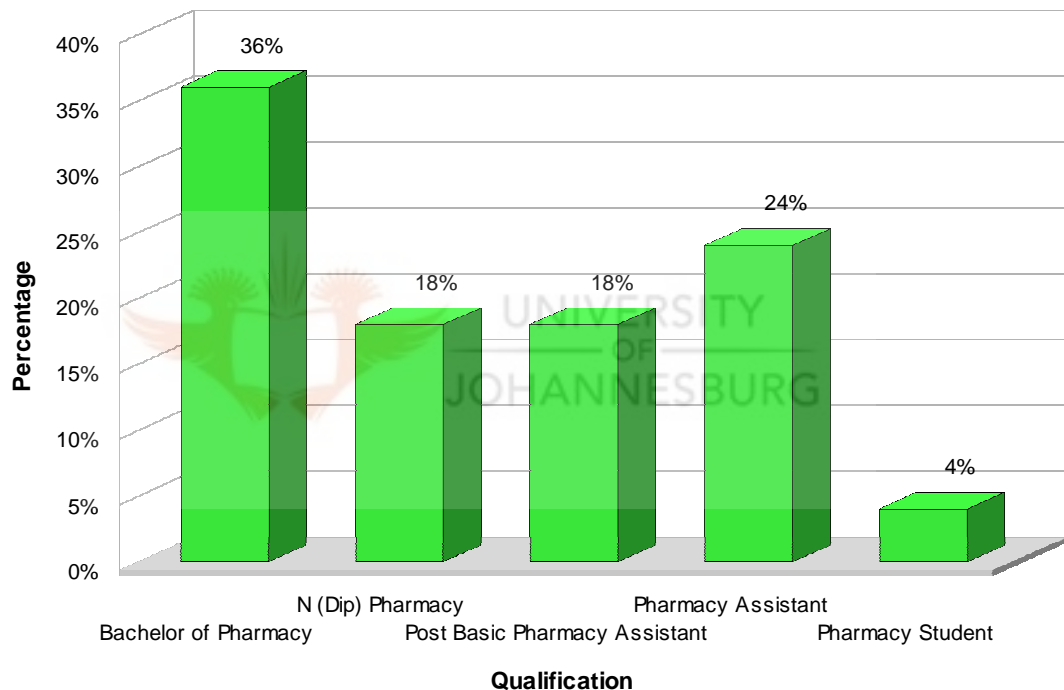


(N=49)

Figure 4.2: Race Representation of Survey Participants

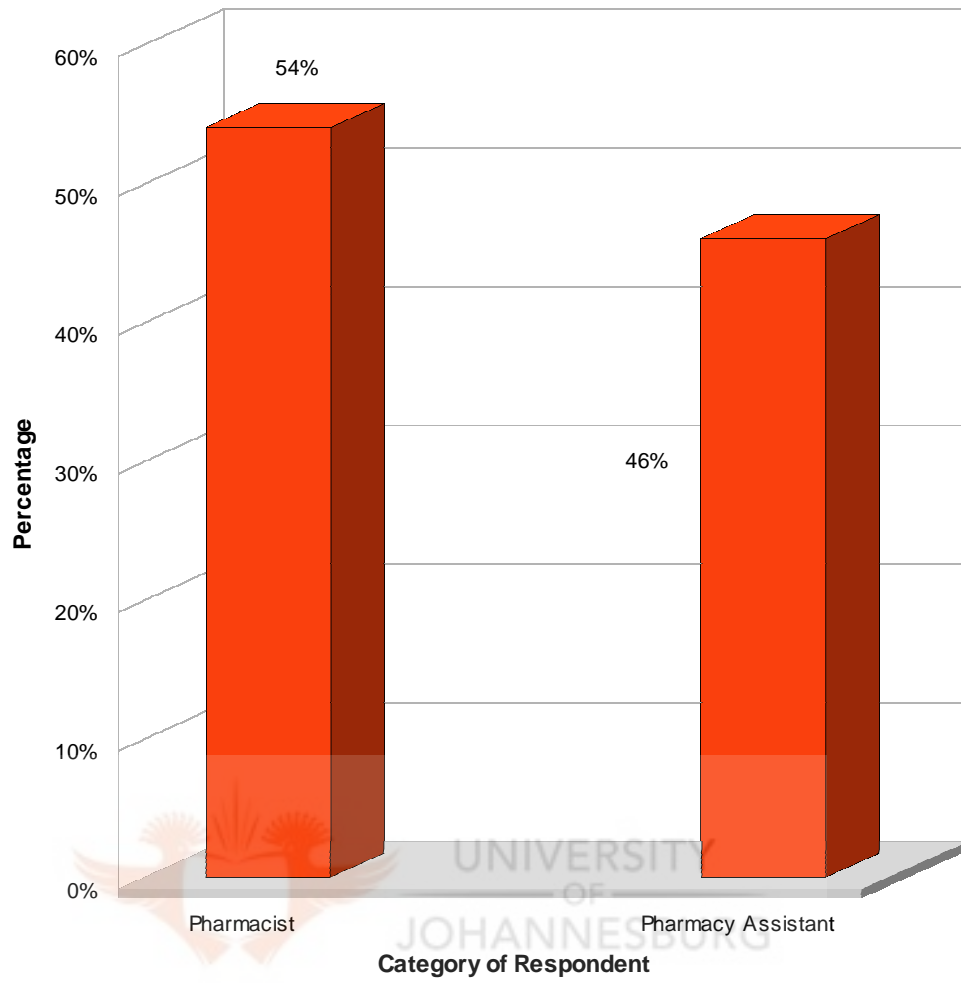
4.2.3 Pharmaceutical Qualification

Figure 4.3 illustrates the qualifications of the participants. Thirty six percent had received a B. Pharm (N=18), while 18% were in possession of a Dip. Pharm qualification (N=9). The remaining participants had received various pharmacy assistant qualifications or were students in the process of acquiring a pharmaceutical degree. Therefore, the number of pharmacists totalled 54% (N=27), while pharmacy assistants totalled 46% (N=23) (Figure 4.4).



(N=50)

Figure 4.3: Pharmaceutical Qualification of Survey Participants

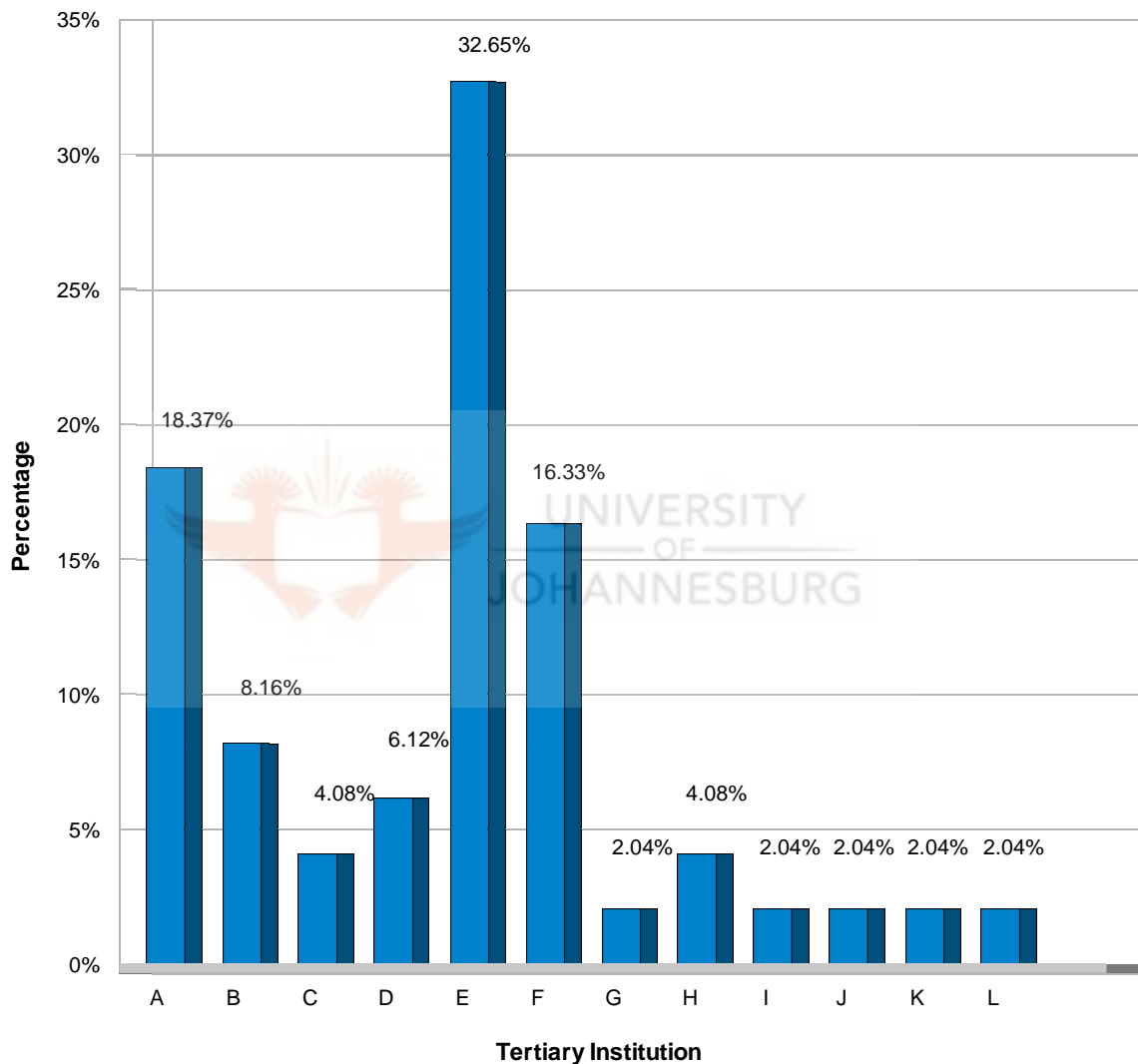


(N=50)

Figure 4.4: Qualification Category of Participants

4.2.4 Qualifying Tertiary Educational Institution

Figure 4.5 illustrates the tertiary educational institutions attended by the participants. The highest percentage of pharmacists who took part in the research qualified through the University of the Witwatersrand (32.65%; N=16), followed by the Health Science Academy, where 18.37% (N=9) of pharmacists' assistants received their accreditation. One participant failed to complete the question.



Key

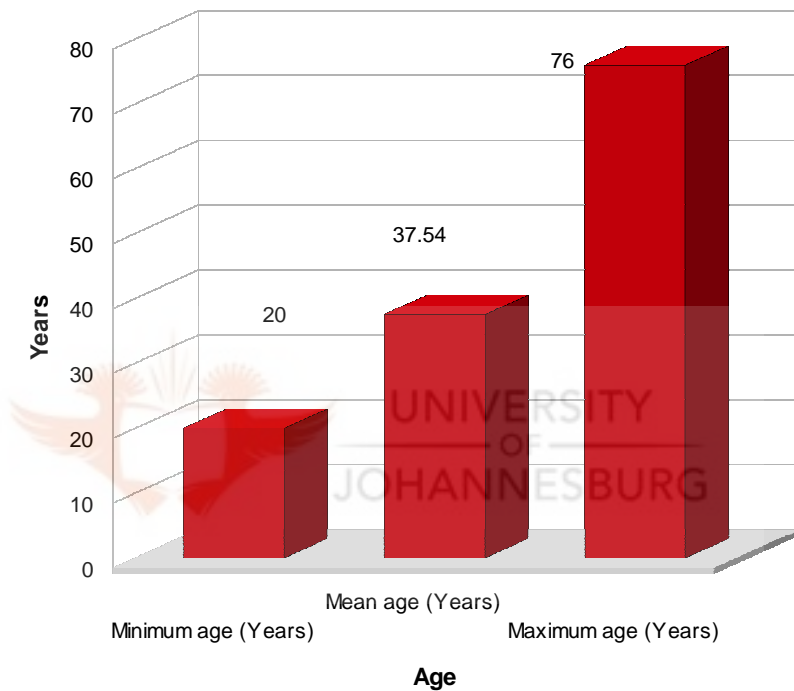
- | | | |
|--|--|-----------------------------|
| A: Health Science Academy | B: University of North W. | C: University of PE |
| D: Potchefstroomse Universiteit vir Christelike Hoër Onderwys | E: Wits University | |
| F: Pharmacy Council | G: University of Potchefstroom | H: Rhodes University |
| I: S Buys Training Academy | J: Sector Education and Training Authority (SETA) | |
| K: Technical College of Jhb | L: Univ. of Durban Westville | |

(N=49)

Figure 4.5: Qualifying Tertiary Institution

4.2.5 Age

Of the 50 people who participated in the survey, the average age was 37.54 years with a standard deviation of 12.36. The youngest participant was 20 years of age, while the oldest was 76 years old.

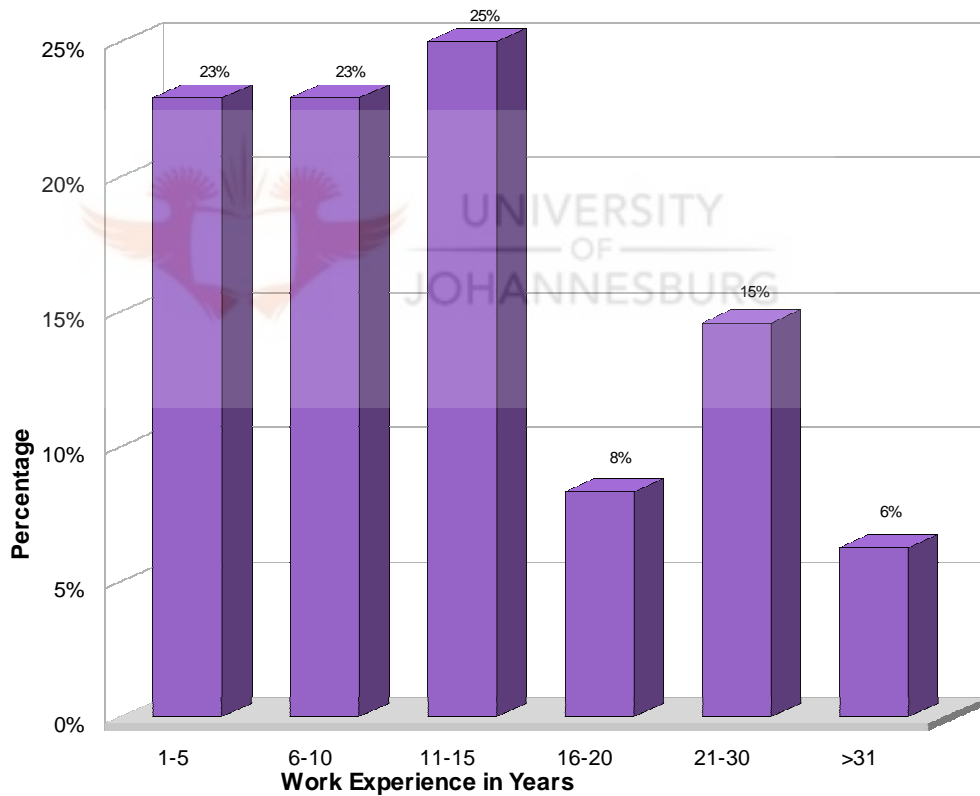


(N=50)

Figure 4.6: Average Age of Survey Participants

4.2.6 Years of Experience

Figure 4.7 illustrates the accumulated years of experience of the participants, in increments of 5 years. Those who answered this question (N=48) had a total of 654 years of retail pharmacy experience between them. Two participants failed to complete the question. The highest percentage had 11-15 years of experience each (25% of those who answered the question or N=12). The category with the least number of participants was those with over 31 years experience (6.25% or N=3). The least work experience possessed by a respondent was 1 year (N=2) while the most work experience possessed by a respondent was 37 years (N=1).

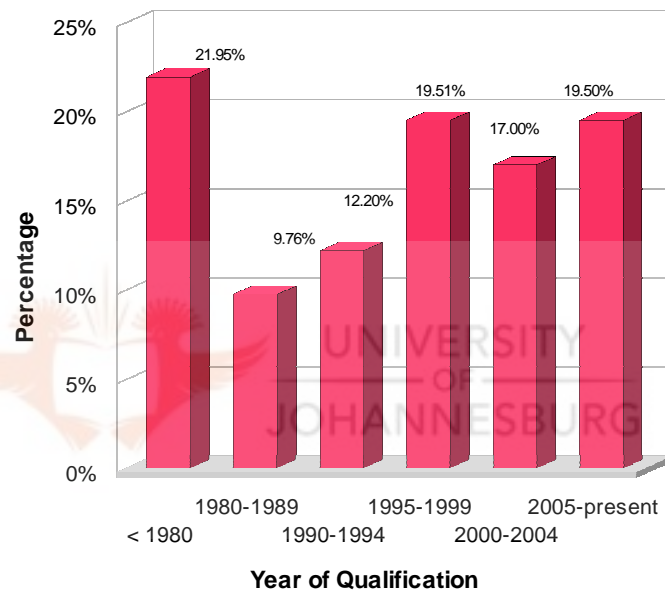


(N=50)

Figure 4.7: Accumulated Work Experience of Participants in 5 Year Increments

4.2.7 Year of Qualification

Figure 4.8 illustrates the year in which respondents received their respective qualifications in Pharmacy. The question was not completed by nine respondents. Of the 41 respondents who did answer the question, 21.95% qualified before 1980 (N=9), followed by 19.51% (N=8) who qualified between 1995 and 1999, and after 2005 respectively. The earliest date of qualification was 1958, with the most recent being in 2007.



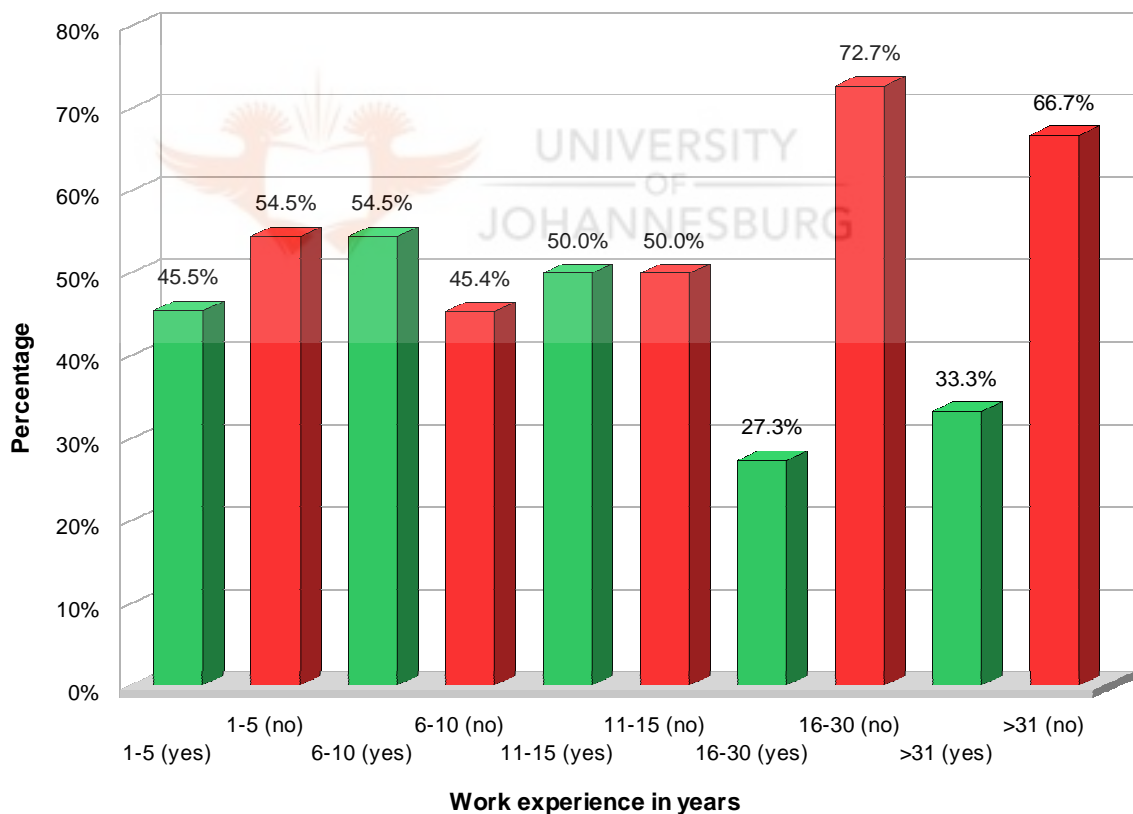
(N=41)

Figure 4.8: Year in which Participants qualified in Pharmacy

4.3 Personal Experience and Understanding of Homoeopathy

4.3.1 During the course of your studies, did you receive any training with regard to Homoeopathy?

Forty two percent (N=21) of respondents received training on homoeopathy during the course of their qualification. Of these, 12 were pharmacists, and 9 were pharmacy assistants. Only 31.8% of males had received training, as compared with 50% of females. Those who had been qualified for 16 years or more were less likely to have been exposed to homoeopathy in their formal education (28.6% or N=4) when compared with those qualified for less than 16 years (50% or N=17).

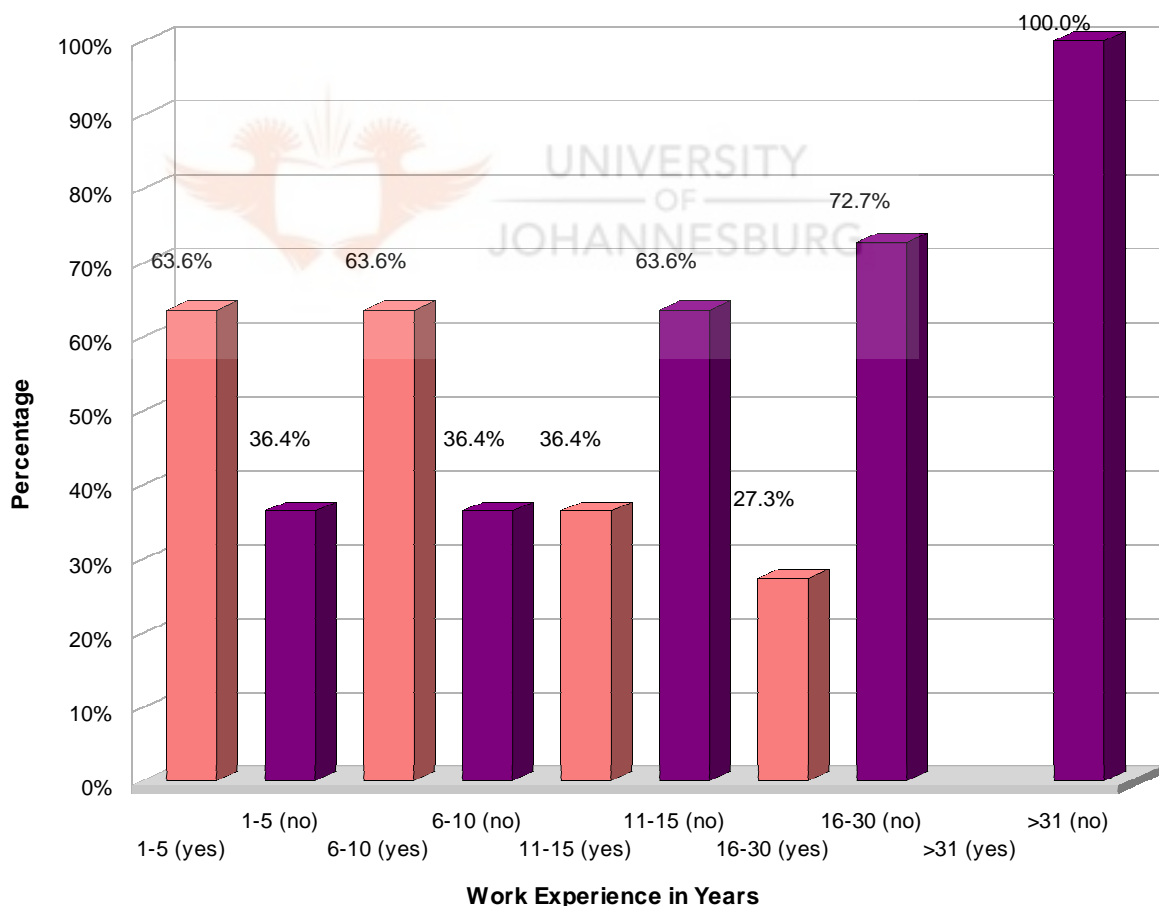


(N=50)

**Figure 4.9: Homoeopathy training during the course of normal studies:
Comparison according to Work Experience**

4.3.2 During the course of your studies, did you receive any training with regard to Complementary/ alternative medicine?

Of those who answered the question, 43.75% said that they had received training with regards to Complementary or Alternative medication. Two respondents failed to answer, therefore the actual number of respondents who said yes was equal to question 4.3.1 above (N=21). Sixteen pharmacists (61.5%) said that they had not received this education, compared with only 11 assistants (50%). Again, more females in the sample group had received training than males (50% as opposed to 36.4%). Those who had been qualified for longer than 10 years showed a lack of exposure to alternative medication, specifically 63.6% of those qualified between 11 and 15 years, 72.7% of those qualified between 16 and 30 years and 100% of those qualified longer than 30 years.



(N=48)

Figure 4.10: Complementary medicine training during course of studies: Comparison according to work experience

4.3.3 Do you feel that this sort of training is useful and/ or of interest to pharmacy students?

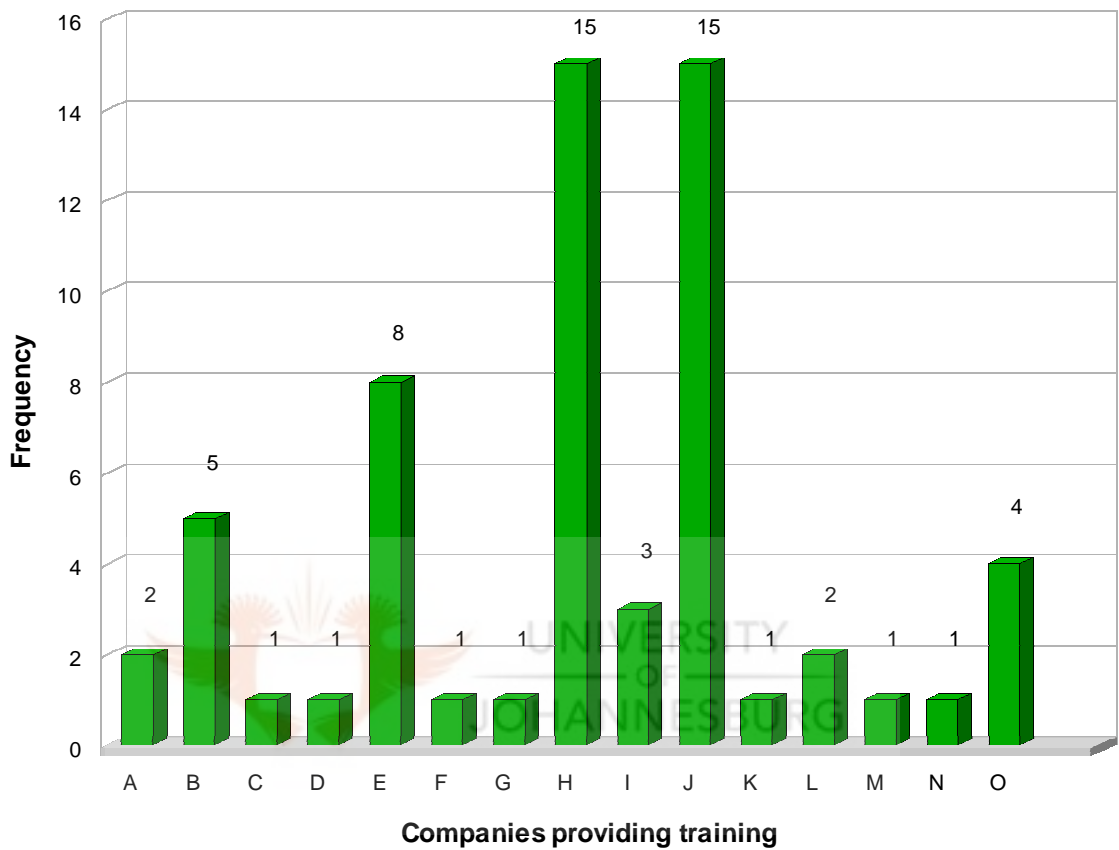
All of those surveyed answered yes to this question, regardless of qualification, gender or year of qualification.

4.3.4 Have you ever received training from a homoeopathic pharmaceutical company with regards to their products?

The majority of participants had some form of training from a homoeopathic manufacturing company (62% or N=31). Proportionally more pharmacists than pharmacy assistants received training – 70.4% versus 52.2%. Again more females answered yes – 71.4% as opposed to 50% of males. Of those qualified for between 6 and 10 years, 90.9% had received training, compared to only 36.4% of those qualified for between 1 and 5 years and 33.3% of those qualified for more than 30 years.

4.3.5 If so, please list the companies which have provided this training.

Figure 4.11 depicts the 14 different companies or their various products that were listed by the participants. The two companies that provided the most training were Natura and Pharma Natura, each having trained 24.19% of those surveyed. Following these were Heel (12.9%), Bioforce (6.45%) and Boiron (6.45%).



Key

- | | | |
|------------------|-----------------|------------|
| A: Bioharmony | B: Boiron | C: Erex |
| D: Flordis | E: Heel | F: Kenza |
| G: Lennon's | H: Natura | I: Pegasus |
| J: Pharma Natura | K: Pharmachoice | L: Tilob |
| M: Foodstate | N: Wala | O: Vogel |

Figure 4.11: Frequency of Homoeopathic Companies providing Training to Pharmacists and Pharmacy Assistants

4.3.6 Do you feel training by these companies is or would be useful to you?

Ninety eight percent of respondents felt that training would be beneficial. One participant answered 'Not Sure'. He or she had been qualified as a pharmacist for over 30 years.

4.3.7 Have you or anyone in your family ever consulted a homoeopathic practitioner?

Twenty six of those surveyed answered yes (52%), versus 24 who said no (48%). Of these, 61.5% were pharmacists, compared with 38.5% who were pharmacy assistants. Females in the sample group were more likely than men to use homoeopathic medicine (60.7% of females compared to 40.9% of males).

4.3.8 If so, do you/ they feel the treatment received was satisfactory?

Of those that had used homoeopathic medications, the majority chose 'Most of the Time' to describe their level of satisfaction (70.37%). Over a quarter of participants (25.93%) stated that homoeopathy was always satisfactory, while 3.7% felt that it was never satisfactory.

4.3.9 Have you ever personally used Over-the-counter homoeopathic medication?

Thirty percent of participants answered no to this question (N=15), while 70% (N= 35) answered yes.

4.3.10 If you answered yes, for which conditions have you used them?

Figure 4.12 illustrates how those respondents that had used over-the-counter homoeopathic preparations, listed common colds and flu (71.43% or N=25) and sinusitis (60% or N=21), as the most common conditions treated. Following these two categories were physical injuries (42.86% or N=15) and stress/ depression (37.14% or N=13). Other conditions mentioned under 'other' include asthma, digestion, insomnia, varicose veins, oral thrush and vertigo. The percentage of female respondents (66.7%) who used homoeopathic medication for headaches differed significantly from the percentage of males (0%) ($p=0.031$) (Figure 4.13).

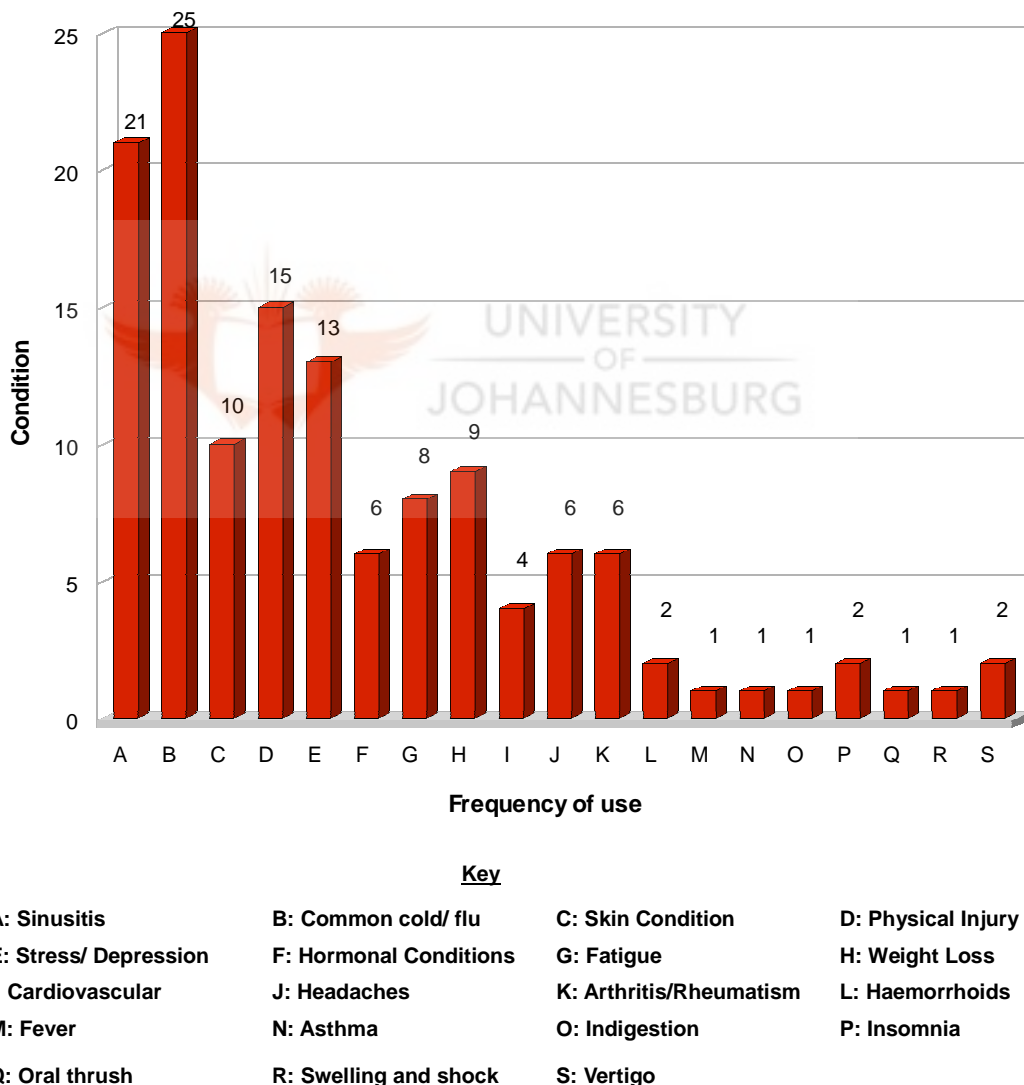


Figure 4.12 Frequency of Use of Homoeopathic Medication in Common Illness

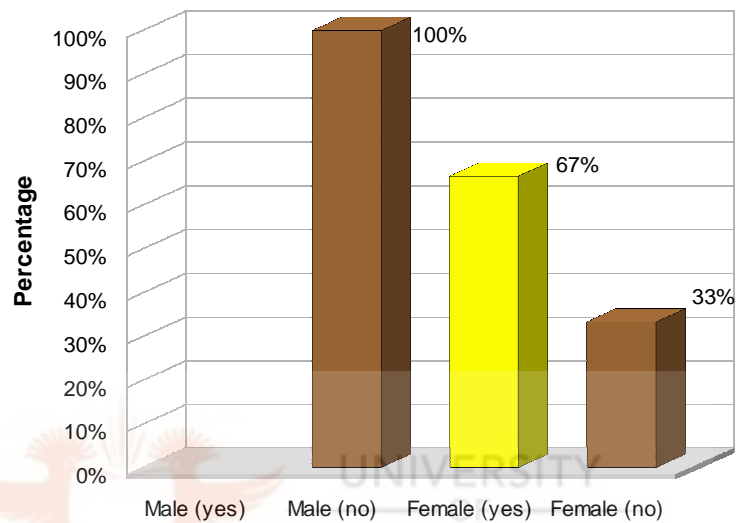


Figure 4.13: Significant difference between Homoeopathic Medication use between men and women in the treatment of headaches

4.3.11. To what extent do you agree with the following statements:-

4.3.11.1 Homoeopathic medication is effective.

Only 53.06% (N=26) of participants agreed to a greater or lesser extent that homoeopathic medications are effective. Two participants (4.08%) believed that it is ineffective, while a significantly larger proportion (42.86% or N=21) neither agreed nor disagreed.

4.3.11.2 Homoeopathic medication is only effective due to the placebo effect.

The highest proportion of respondents disagreed to a greater or lesser extent with this statement (51.02% or N= 25). Four participants (8.16%) believe that this is true, while 40.82% (N=20) had neutral feelings on the subject.

4.3.11.3 Homoeopathic medication has no side effects.

Twenty four respondents (48.98%) disagreed to a greater or lesser extent i.e. felt that homoeopathic medicines do have side effects, 26.53% (N=13) agreed to a greater or lesser extent with statement and 24.49% (N=12) were neutral.

4.3.11.4 Homoeopathic and Herbal medications are the same thing.

The majority of responses (70.83% or N=34) disagreed to a greater or lesser extent with this statement, 20.83% (N=10) were neutral and only 8.33% (N=4) agreed to a greater or lesser extent.

4.3.11.5 Homoeopathic medication works well in conjunction with conventional medicine.

Forty six percent (N=23) agreed to a greater or lesser extent with this statement. Thirty four percent (N=17) neither agreed nor disagreed i.e. were neutral while 20% (N=10) disagreed to a greater or lesser extent.

4.3.11.6 Homoeopaths are clinically trained to make a medical diagnosis.

More than half (55.1%) of respondents agreed to a greater or lesser extent with this statement; 18.37% (N=13) disagreed to a greater or lesser extent and 26.53% (N=13) neither agreed nor disagreed.

4.3.11.7 Homoeopathic medication is useful in physical conditions.

Of those who answered this question (N=50), 60% (N=30) agreed to a greater or lesser extent with this statement; 38% (N=19) were neutral and only 1 participant disagreed to a greater or lesser extent.

4.3.11.8 Homoeopathic medication is useful in mental conditions.

Of those who answered this question (N=49), less participants felt that homoeopathic medication is useful in mental than in physical conditions (42.86% or N=21). Twenty participants (40.82%) disagreed with the statement to a greater or lesser extent, while 16.33% (N=8) were neutral.

4.3.11.9 Homoeopathic medication is useful in emotional conditions.

Again, 49 participants answered this question. Of those, 59.18% (N=29) agreed to a greater or lesser extent, while only 8.16% (N=4) disagreed to a greater or lesser extent. 32.65% (N=16) were neutral.

4.3.11.10 Homoeopathic medication takes a long time to work.

All participants answered this question. Most were neutral towards this statement (42% or N=21). The second largest group was of those that agreed to a greater or lesser extent (32% or N=16), with the least amount disagreeing to a greater or lesser extent (26% or N= 13).

4.3.11.11 Homoeopathy conflicts with my religious beliefs.

All of those surveyed answered the question. The majority (78% or N=39) disagreed to a greater or lesser extent, and 20% or N=10 were neutral on the topic. Only 1 person (2%) agreed to a greater or lesser extent with this statement.

4.4 Professional Perceptions of Homoeopathy in the Workplace

4.4.1 Does your pharmacy stock homoeopathic medication?

Most pharmacies involved in the study stock homeopathic medications. Ninety four percent of participants said that they did sell homoeopathics, 4% did not and 2% (N=1) were not sure.

4.4.2 Does your pharmacy stock herbal/ naturopathic medication?

Of those that answered this question (N=47), 91.49% (N=43) did stock herbal medication at their place of work, while 4.26% (N=2) did not or were not sure respectively.

4.4.3 How often are you asked for advice on homoeopathic medication?

Most of those participants who answered said they were asked for advice on homoeopathic medication several times a week (N=28 or 57.14%). The next largest group (22.45% or N=11) were asked for advice daily, while only 12.24% (N=6) were asked less than once a week, 4.08% (N=2) were asked once a week and 4.08% (N=2) were never asked for advice.

4.4.4 If you are not responsible for homoeopathy in your pharmacy, who is?

Only 37 out of 50 participants answered this question. Therefore it is possible that a maximum of 26% (N=13) of those involved in the survey are responsible for the homoeopathic medicine in their pharmacy. Of the 37 who are not, 16 (43.2%) listed the

responsible person as being a homoeopath. Seven respondents (18.91%) said that they had dedicated personnel or 'vitamin advisors', 10.81% (N=4) said other pharmacists or pharmacy assistants, while 13.51% listed front shop staff as responsible for homoeopathic medications in their pharmacy. Finally, one participant stated that everybody was responsible, while another stated that nobody in particular dealt with the homoeopathic medication.

4.4.5 Do you feel confident about your ability to provide adequate advice and information about Homoeopathic medication?

Of those that answered this question, 55.1% (N=27) did not feel confident giving advice about homoeopathic medication, 24.48% (N=12) were happy enough about their level of knowledge to give advice, while 20.41% (N=10) were not sure.

4.4.6 Do you feel that there is a use for homoeopathy in a pharmacy setting in general?

Forty three participants (87.76%) answered yes to this question, 6.12% (N=3) felt that there was no use for it, and equally 6.12% (N=3) were not sure. Of those that answered no or weren't sure, only 1 was a pharmacist while the others (N=5) were pharmacy assistants.

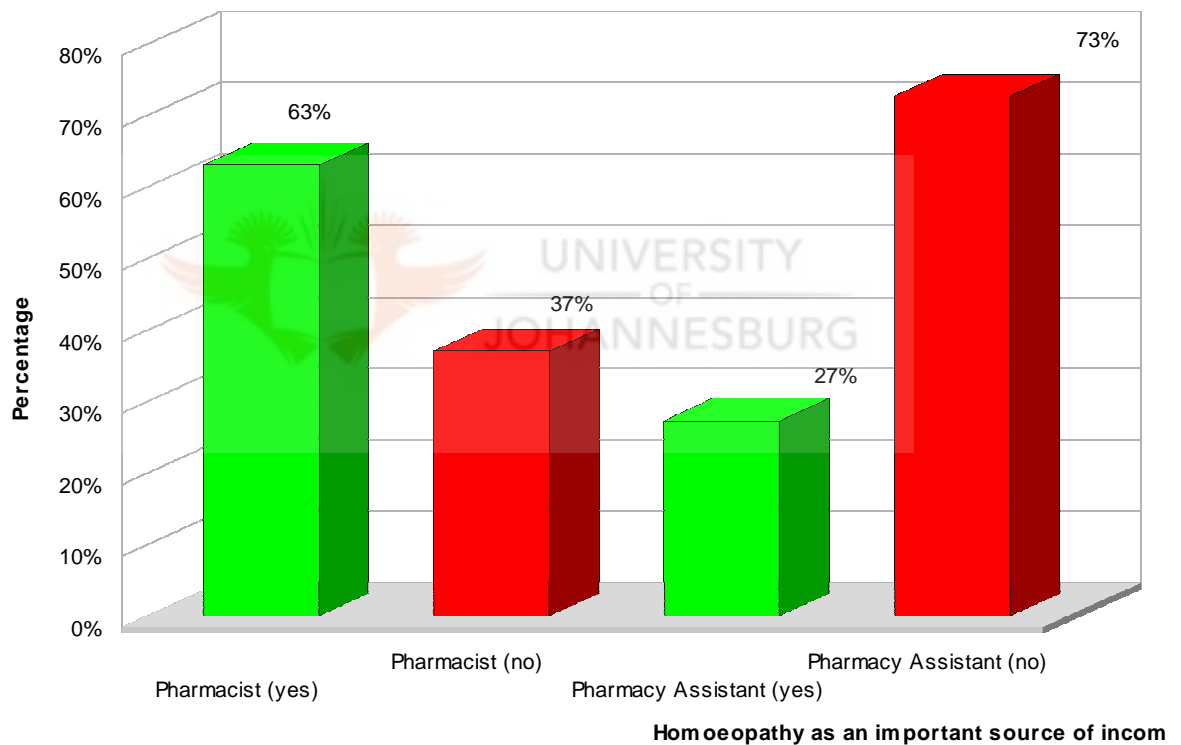
4.4.7 Do you ever recommend homoeopathic medicines to your customers?

The vast majority of respondents answered yes to this question (89.80% or N=44), only 8.16% (N=4) answered no, while 2.04% (N=1) answered sometimes. There was no statistical difference between pharmacists and pharmacy assistants.

4.4.8 Is the sale of Homoeopathic medications an important source of income for your pharmacy?

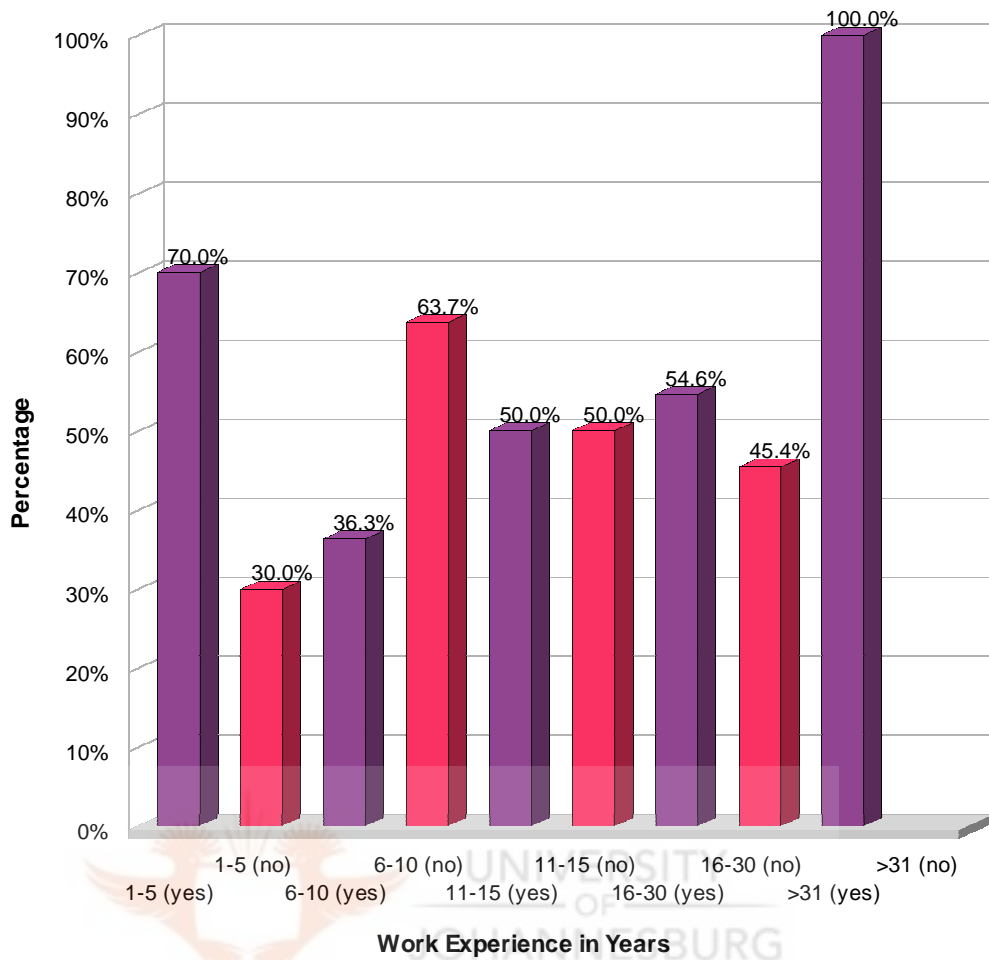
Almost half of respondents (46.94% or N=23) felt that homoeopathic medications are an important source of income for their pharmacy. Almost as many (34.69% or N=17) said

that it was not, and 18.37% were not sure. There was a statistical difference between the views of pharmacists and pharmacy assistants for this question ($p=0.021$) (Figure 4.14). Sixty three percent of pharmacists ($N=17$) felt that homoeopathy is an important source of income, while 37 % ($N=10$) felt that it was not. In the case of pharmacy assistants, this was reversed, with most assistants answering that it was not an important source of income (72.7% or $N=16$) as opposed to only 27.3% ($N=6$) who thought it was. With regard to work experience, the majority (70%) of those who had been working for the shortest amount of time in pharmacy (less than 5 years) and 100% of those who had been working for the longest amount of time in pharmacy (longer than 31 years) felt that homoeopathy was an important source of income.



($N=47$)

**Figure 4.14: Homoeopathy is an important source of income for pharmacies:
Comparison between Pharmacists and Pharmacy Assistants**



(N=47)

**Figure 4.15: Homoeopathy as an important source of income for pharmacies:
Comparison according to Work Experience**

4.4.9 Why do you believe some customers prefer Homoeopathic medication?

4.4.9.1 Cost

Of those that answered this question (N=42), 57.14% (N=24) felt that the cost of homoeopathic medicines was not a factor, while 42.86% (N=18) did. There was little statistical difference in the opinions of pharmacists versus pharmacy assistants in this respect; 41.7% of pharmacists answered yes, compared with 44.4% of pharmacy assistants.

4.4.9.2 Easily obtained (i.e. unscheduled)

Forty four participants answered this question. Of those, 77.27% (N=34) felt that this was an important factor in their customers choosing homoeopathic medication over conventional treatment, as opposed to 22.73% (N=10) who did not. These views were held similarly between pharmacists and pharmacy assistants. Eighteen pharmacists answered yes (75%), compared to 80% (N=16) of pharmacy assistants.

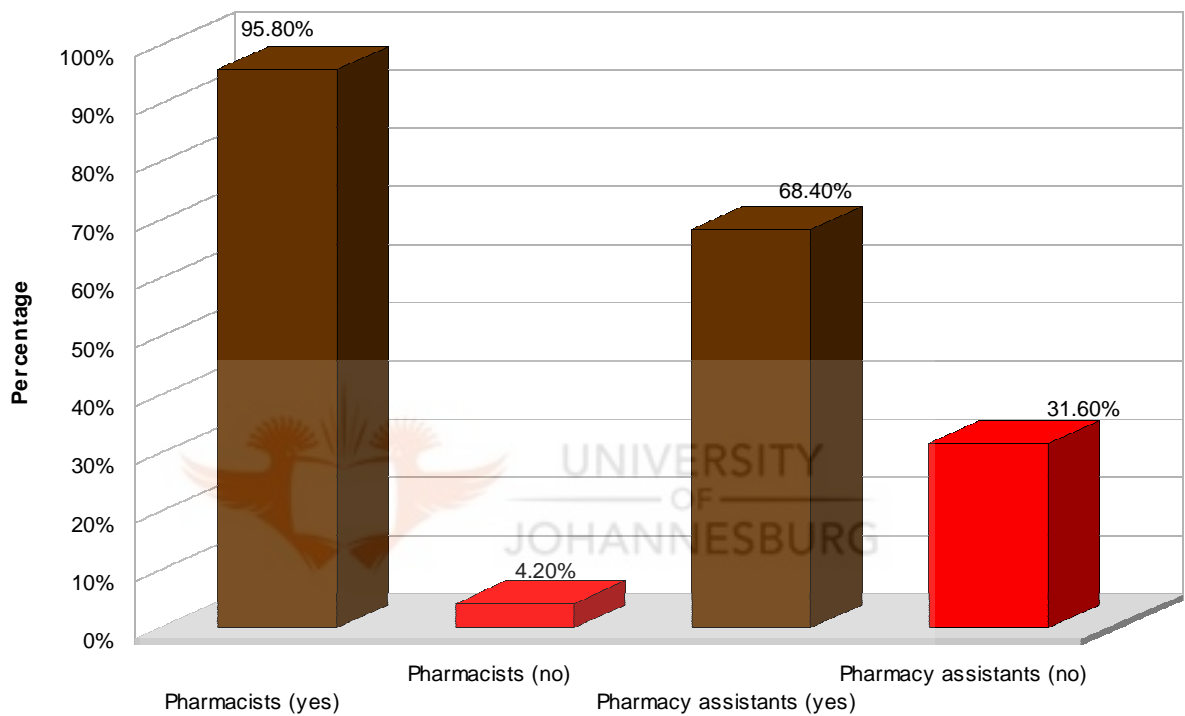
4.4.9.3 Religious beliefs

A large number of participants did not answer this question (N=14). Of those that did, 86.11% (N=31) did not believe that religion plays a role in their customers choice to use homoeopathic medicines, while only 13.89% (N=5) felt that it does. Pharmacy assistants were more likely to believe that religion is influential in this way. Four pharmacy assistants (26.7%) answered yes to this question as opposed to only 4.8% of pharmacists (N=1).

4.4.9.4 Disillusionment with conventional medicine/ doctors

Of those that answered this question, 83.72% (N=36) felt that this was a reason their customers choose to use homoeopathic treatment instead of conventional medication. Only 16.28% (N=7) felt that this was not a factor. There was a statistical difference between the views of pharmacists and pharmacy assistants on this subject ($p= 0.033$), as 95.8% (N=23) of pharmacists believed that it was a factor, compared to only 68.4%

(N=13) of pharmacy assistants. Therefore only 4.2% (N=1) of pharmacists felt that it was an insignificant factor, compared to 31.6% (N=6) of assistants. Seven participants did not answer the question.



(N=43)

Figure 4.16: Customers prefer Homoeopathy because of disillusionment with conventional medicine

4.4.9.5 Safety i.e. lack of side effects

The majority of respondents felt that this was a significant reason (97.83% or N=45). Only one participant (2.17%) felt that it was not a valid factor. Four participants failed to answer the question.

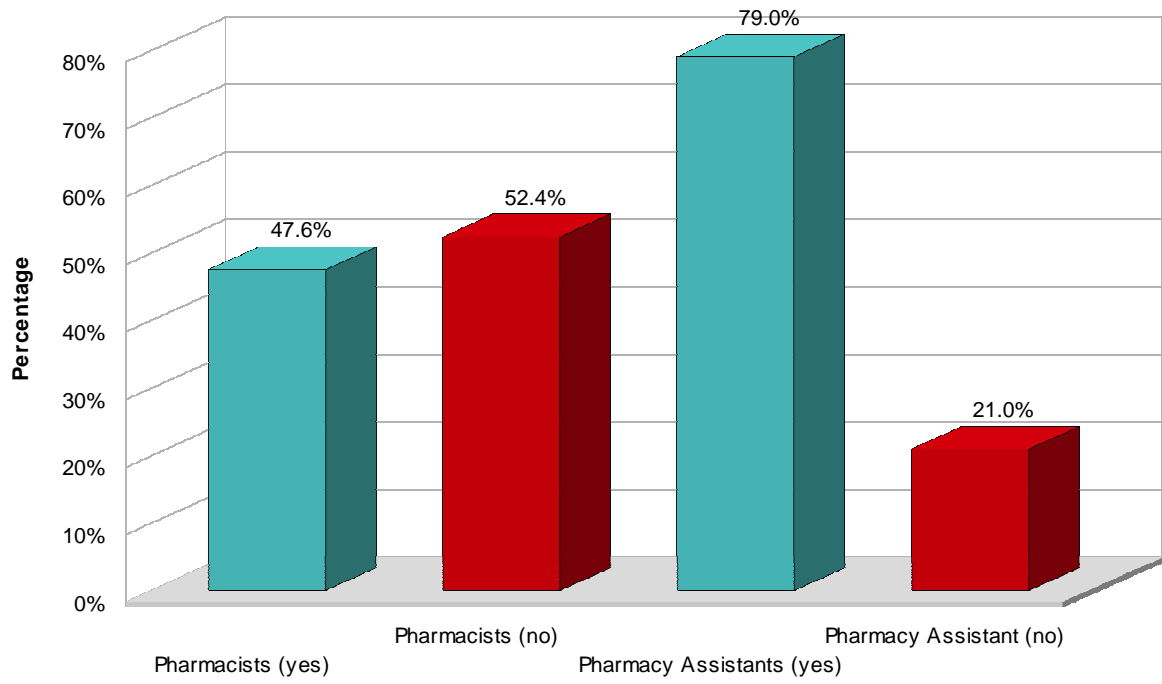
4.4.10 Why do you believe some customers avoid using Homoeopathic medication?

4.4.10.1 Scepticism about efficacy

One hundred percent (N=49) of those who answered this question believed that scepticism about efficacy is a reason why customers choose not to use homoeopathic medication.

4.4.10.2 Concerns about quality

Twenty five respondents (62.5%) answered yes to this question, while 37.5% (N=15) answered no. Ten participants did not answer the question. There was a borderline statistical difference between pharmacists and pharmacy assistants ($p=0.055$) – 52.4% (N=11) of pharmacists said that this was not a concern, compared with only 21% (N=4) of pharmacy assistants.



(N=40)



Figure 4.17: Customers avoid Homoeopathy because of concerns about quality

4.4.10.3 Not covered by medical aid

The majority of participants (85.71% or N=36) felt that this was a reason why customers choose not to use homoeopathic medication. Only 14.29% (N=6) said that this was not an important reason, while 8 participants did not answer this question.

4.4.10.4 Not well researched

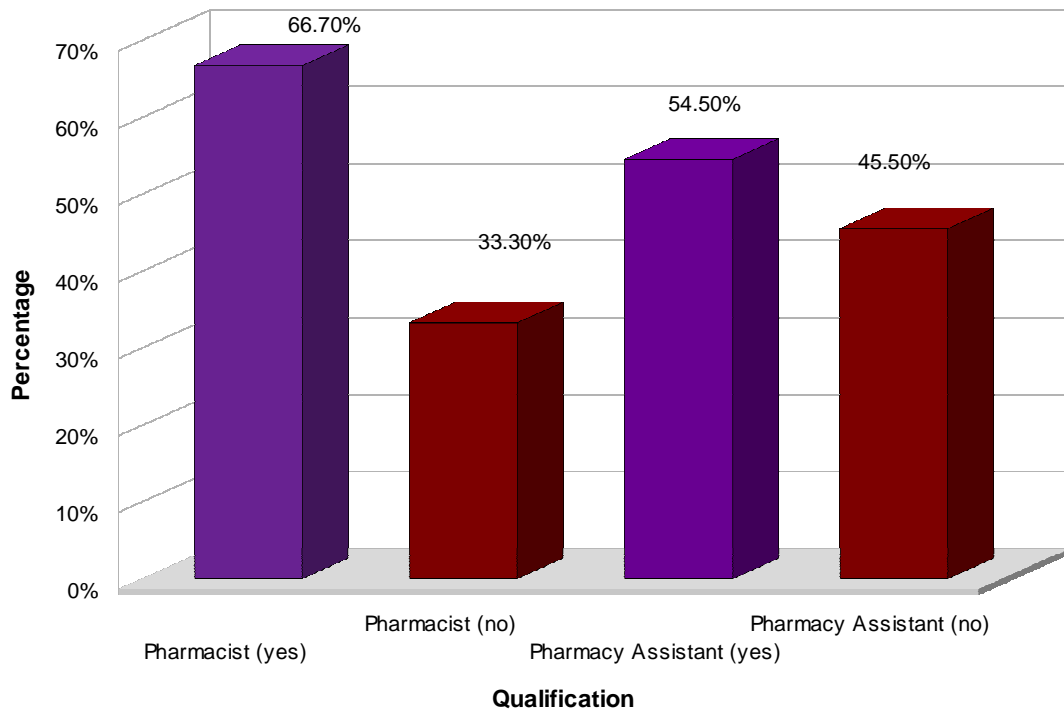
Twenty five participants (61.22%) felt that the lack of research done on homoeopathic medicines was an important reason why people preferred not to use it. Fifteen people (37.5%) did not feel that this was a contributing factor and 10 participants did not answer the question.

4.4.10.5 Not well understood

The vast majority of those surveyed (97.92% or N=47) believe that people do not use homoeopathy because it is not well understood. Only one respondent (2%) felt that this was not a valid reason. Two participants left out this question.

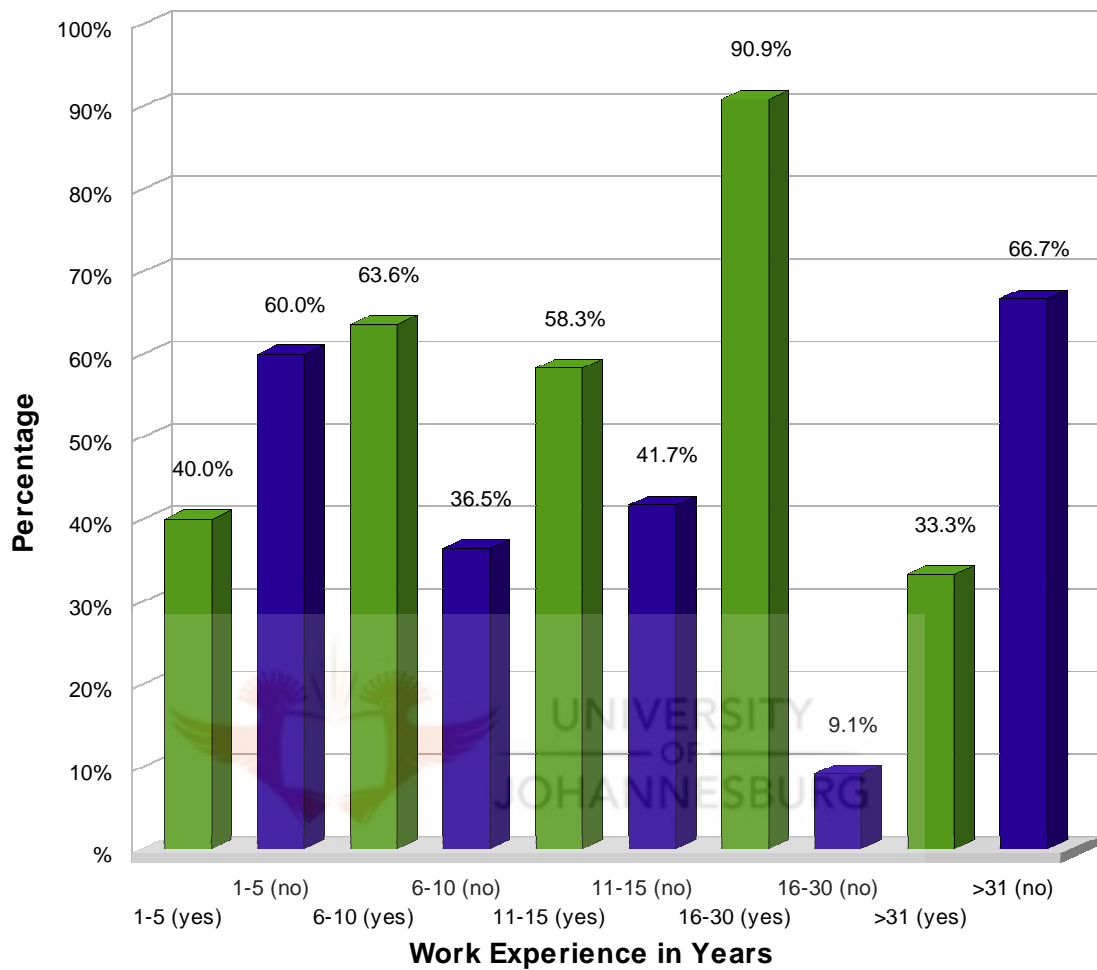
4.4.11 Do you feel that homoeopathic medicines should be an option in prescribed minimum benefits?

Of those surveyed, 61.22% (N=30) feel that homoeopathy should be an option in prescribed minimum benefits. Of the remaining participants, 16.33% (N=8) believe that it should not be an option, and 22.45% (N=11) are not sure whether it should be or not. One participant did not complete this question. The majority of pharmacists (66.7% or N=18) believe that it should be an option, compared to only 45.5% (N=10) of pharmacy assistants.



(N=49)

Figure 4.18: Homoeopathic medicine as an option in Prescribed Minimum Benefits: Comparison according to Qualification



(N=49)

Figure 4.19: Homoeopathic medicine as an option in Prescribed Minimum Benefits: Comparison according to Work Experience

CHAPTER 5

DISCUSSION

5.1 Summary of Results

This survey research aimed to investigate the personal and professional perceptions and understanding of homoeopathy of 50 pharmacists and pharmacists' assistants. Of those who responded to the survey, 27 were qualified pharmacists and 23 were pharmacists' assistants. The results showed a general trend towards a wider acceptance of homoeopathy and an interest in the modality within this group. The majority of participants were positive in their responses. The survey questionnaire was divided into 3 sections. The first section dealt with demographic details such as gender, age, qualification, years of experience and race. There were more female respondents than males (56% or N=28 as opposed to 44% or N=22) and a wide representation of age: the average respondent age was 37.54 years with a standard deviation of 12.36 years. The youngest participant was 20 years of age, while the oldest was 76 years old.

The second section of the survey dealt with the respondent's personal experiences and knowledge of homoeopathy. Of those who had received training on homoeopathy during their university training, only 28.6% (N=4) had been qualified for more than 16 years, as opposed to 50% (N=17) who had been qualified for less than 16 years. This could perhaps be an indication of the increased awareness and popularity of homoeopathy in recent years. Irrespective of university exposure and training, however, 100% of respondents felt that this training would be useful to pharmacy students. This shows a need and desire to learn more about homoeopathy within the pharmacy profession. A higher percentage had received training from homoeopathic companies on their over-the-counter products (62% or N=31). This shows that there is a drive within the homoeopathic manufacturing industry to increase the knowledge of homoeopathy among pharmacy professionals.

Of the group of respondents that had used homoeopathy, or had members of their family who had used homoeopathy, a higher percentage were pharmacists (61.5%)

versus pharmacists' assistants (38.5%). Women were also more likely to try homoeopathic medicines than men (60.7% versus 40.9%). Of those that had tried homoeopathic therapy, the majority were positive in their response, with 70.37% saying treatment was satisfactory 'most of the time', while only 3.7% felt it was 'never' satisfactory. The most popular conditions for which pharmacists had used homoeopathy were common colds and flu and sinusitis, followed by physical injury and stress/ depression. There was a statistically significant difference in the use of homoeopathic remedies in the treatment of headaches; 0% of the male participants had used remedies for the complaint compared with 66.7% of the female participants. This may be due to the fact that women tend to suffer more frequently from headaches than men.

With regards to the participants personal understanding and knowledge of homoeopathy, results were both positive and negative. Encouragingly, the majority (53.06%) said that homoeopathic medicines are effective, with only 4.08% saying categorically that it is not at all effective. The remainder (42.86%) were undecided in this regard. When asked whether the effects of homoeopathy are due to the placebo effect, a similar percentage (51.02%) disagreed, while again, a large proportion (40.82%) were neutral and neither agreed nor disagreed. This possibly indicates a large proportion of the group that could be positively influenced with further explanation and information on homoeopathy. This situation may well extend to the general pharmacist population.

Interestingly, while 48.98% of participants disagreed with the view that homoeopathy has no side effects, 26.53% felt that this is true and 24.49% were not sure. This statistic becomes important when one takes into account that although the vast majority rightly said that homoeopathic and herbal medications are not the same, 20.83% were neutral on the topic and 8.33% of respondents believe this to be true. This makes education on the subject vitally important in order to protect patients' wellbeing. Homoeopathic medications do in some instances have contraindications and may sometimes cause aggravations, and many herbal extracts are contraindicated in several conditions and cause unwanted or even dangerous interactions when combined with allopathic prescriptions. A lack of understanding of these factors places both the patient and pharmacist in a potentially dangerous situation. Coupled with this, 55% of the

participants agreed that homoeopathic medicines work well in conjunction with allopathic medications, 26.53% were neutral and only 20% disagreed. This translates into an approximate 81% of pharmacy professionals who may recommend homoeopathic remedies to patients with an existing condition.

When asked to rate whether homoeopathy was effective for physical, mental or emotional conditions, 60% said that it was useful on a physical level, 59.8% felt it was useful on an emotional level, while only 42.86% agreed that it was useful for mental complaints. The largest proportion (42%) were neutral when asked whether homoeopathy takes a long time to work, 32% agreed that it does indeed take a long time to work, while only 26% disagreed. This illustrates another area where education may help to dispel misconceptions about homoeopathy and increase support among pharmacists for its use in acute conditions. Only one participant felt that homoeopathy conflicts with his or her religious beliefs, while 20% were neutral (possibly due to either a lack of understanding of homoeopathic principles or general religious neutrality) and the vast majority (78%) said that it did not conflict with their religious views.

Section three of the questionnaire dealt with the participant's professional experience and perceptions of homoeopathy in the workplace. The majority (94%) said that homoeopathic medicines are available for sale at their place of work. This indicates that homoeopathy has become a relatively mainstream modality in the retail environment. It remains only for the homoeopathic profession as a whole to increase product awareness and understanding in order to facilitate its growth in the healthcare market. Interestingly, slightly less (91.49%) respondents said that their pharmacy stocks herbal products, which may simply indicate a lack of understanding of the difference between herbal and homoeopathic preparations.

The results showed that most pharmacists are asked for advice on homoeopathy even if they do not work specifically with the homoeopathic medicines in their pharmacy. When asked how frequently they are asked for advice, 57.14% answered at least several times a week, 22.45% answered on a daily basis and only 4.08% are never asked for information. With regards to who, if not themselves, is responsible for the homoeopathic medicines in their place of work, only 37 out of the 50 respondents answered the question. This translates into a maximum of 26% of respondents who

may be directly responsible for issues such as customer advice, training, promotions and stock control of the homoeopathic medicines in their pharmacy. Of those who were not personally responsible, an encouraging 43.21% listed the responsible person as a qualified homoeopath. This shows that pharmacy owners both understand the value of in depth understanding and specialist knowledge of homoeopathy and also that they appreciate the high level of training associated with a qualification in homoeopathy.

A very small proportion of participants were confident about their level of knowledge of homoeopathy (24.48%). The majority were definitely not confident (55.1%) and 20.41% were unsure of their level of knowledge. From this it can be seen that there is definitely an awareness among pharmacy staff that they lack training in alternative medicine modalities, specifically homoeopathy. Added to this is the fact that 87.76% of respondents feel that there is use for homoeopathy in a retail pharmacy setting in general and 89.8% recommend homoeopathic medicines to their customers. This means a potentially large proportion of pharmacists and pharmacists' assistants prescribe these remedies without understanding exactly what and how to recommend them.

There was a statistically significant difference between the opinions of pharmacists and pharmacists' assistants with regard to whether or not homoeopathy is an important source of income for their pharmacy. Pharmacists were more likely to agree (63%) as opposed to only 27.3% of pharmacists' assistants. This may be an indication that, due to the fact that assistants often have less managerial responsibilities, they are not necessarily aware of the level of revenue generated by this category of medicines.

Participants were also asked their opinions on factors which may possibly influence their customers to choose homoeopathic remedies over allopathic medicines. Overall, cost was rated as an insignificant factor, with only 42.86% saying that this may be an influence in customers' buying decisions. However, most (77.27%) felt that the ease of obtaining homoeopathics due to their unscheduled status was a factor. This makes a consultation with either a medical practitioner or homoeopath unnecessary and therefore could also be seen as a factor related to the cost of treatment. Religious reasons were not thought to be a significant contributing factor: the majority (86.11%) felt that this has no bearing on the choice between homoeopathy and allopathy.

Two factors which the majority of those surveyed felt were important was firstly, disillusionment with allopathic doctors and treatments (83.72% agreed that this is a factor). There was a significant statistical difference between the views of pharmacists and pharmacists' assistants on this issue: 97.8% of pharmacists agreed versus 68.4% of pharmacists' assistants. Secondly, the safety profile (i.e. relative lack of side effects) of homoeopathy versus allopathy was seen by 97.83% of respondents as a major factor.

Similarly, issues which may be influential in causing customers to avoid homoeopathic medicines were also included in the survey. Scepticism about their effectiveness was rated by 100% of respondents as a factor in this regard. Concerns about quality was also considered by the majority (62.5%) as a reason that consumers may not be willing to try homoeopathic remedies. There was a slight statistical difference in the responses given by pharmacists versus pharmacists' assistants. Pharmacists were more likely to feel that this was not a concern as opposed to assistants (52.4% and 21% respectively). In time, as increased legislation is passed governing the testing and manufacture of all alternative medicines, including homoeopathy, this level of doubt amongst the public should hopefully be minimised as unproven products and products whose quality is not ensured are removed from the retail environment.

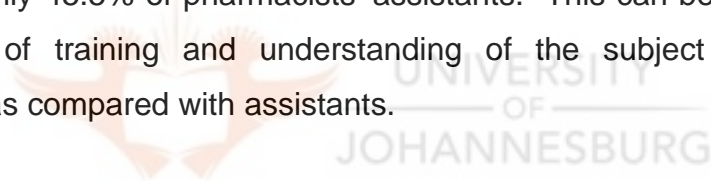
As previously mentioned, medical schemes do not always reimburse their members for over-the-counter homoeopathic products. This was rated by 85.71% of participants as a negative factor in the sale of homoeopathic medicines. The onus is therefore on the manufacturers and suppliers of such products to register them with the relevant bodies and motivate for them to be reimbursable by medical aid funds.

A further negative factor in the sale of homoeopathic remedies is the lack of research available. A large percentage (62.5%) felt that this is a significant influence and is linked to the overall scepticism and quality concerns surrounding homoeopathy in general. There is therefore a need for students and practitioners of homoeopathy as well as those in the manufacturing industry to produce higher standards of research with larger sample groups in order to be able to infer definite conclusions from their results. Also, homoeopathic manufacturing companies that have conducted such research should increase the drive to make their results known to the general public through mainstream

publications and advertising.

Almost all participants (97.92%) felt that the lack of scientific explanation for homoeopathy (i.e. the fact that it is not well understood) was a major reason for customers failing to use homoeopathic medicines. Perhaps with time and advancements in the field of quantum science some light will be shed on the precise mechanism of action of these agents.

When asked whether homoeopathy should be a treatment option in the management of conditions (mainly chronic) on the Prescribed Minimum Benefits list, 61.22% of those surveyed felt that it should. A large percentage of participants were not sure (22.45%), which may either indicate that they have not formed a definite opinion on the issue, or that they may lack understanding of the Prescribed Minimum Benefits system itself. This is further confirmed when the statistics for pharmacists and pharmacists' assistants are investigated individually: 66.7% of pharmacists were in favour of the idea as opposed to only 45.5% of pharmacists' assistants. This can be seen as a result of the higher level of training and understanding of the subject obtained by qualified pharmacists as compared with assistants.



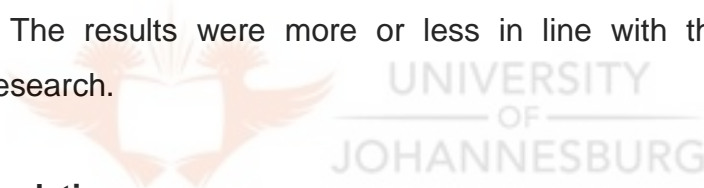
CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusion

The information obtained during this research provided valuable insight into the perceptions, opinions and understanding of homoeopathy held by both pharmacists and pharmacists' assistants working in the Greater Johannesburg Area. This information allows for a greater understanding of the role played by this particular group of professionals in the promotion and advancement of homoeopathy on a retail level.

The results demonstrated an overall appreciation for this modality and a positive attitude towards homoeopathy in general. The majority of issues were seen in the same light by both pharmacists and assistants, with only a few aspects of homoeopathy dividing the two groups. The results were more or less in line with the outcomes of similar international research.



6.2 Recommendations

This study emphasises the need for further research into the influence of the pharmacy profession on homoeopathy in South Africa. It also highlights the lack of education on alternative medicines that staff working in retail pharmacies receive, both during their university training and at postgraduate level. As these alternative medicine systems, specifically homoeopathy, continue to move from the sidelines into mainstream health care, it is imperative for both staff and customer welfare that this situation is alleviated.

The following recommendations may be of some use in further research projects on this subject:

- In order for a complete investigation into the pharmacy profession's opinion on homoeopathy to be achieved, larger scale surveys incorporating participants from all areas of South Africa need to be undertaken.

- It may be interesting to compare the views of pharmacy staff employed in retail and hospital pharmacy environments to see what effect, if any, government protocols have on perceptions of homoeopathy in general.
- Although most questions in this survey included options such as 'not sure', 'no' and 'yes' options when choosing from a list, many respondents failed to answer several questions. This leads to doubt as to whether the participant in fact intended to reply in the negative, or simply did not have an opinion on the subject in question. This is however unlikely, as most questions were of the simply 'yes or no' type.
- In future it may be beneficial to undertake similar surveys using in person interviews rather than, or in addition to a self administered questionnaire. Practically speaking, however, this may be difficult to carry out due to the time pressures faced by individuals working in retail pharmacies. It may be advisable therefore to conduct further studies using mostly questionnaires, combined with small focus groups. This will be helpful if any interesting or puzzling responses require further clarification.

Further research of this kind will lead to greater insight into the fields of both homoeopathy and pharmacy in South Africa and the role that each plays in the promotion of the other in the public realm. This type of information will be of benefit in future attempts to incorporate much needed postgraduate training programmes on homoeopathic medicines into the pharmaceutical profession in South Africa.

CHAPTER 7

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APPENDIX A

PARTICIPANT INFORMATION AND CONSENT FORM

Dear participant

My name is Taryn Mann and I am currently working towards a Masters degree in the Faculty of Health Sciences at the University of Johannesburg. I am conducting research on the perceptions of homoeopathy of a representative sample of pharmacists and pharmacy assistants in the Greater Johannesburg area.

In order to participate, you must be a qualified pharmacist or dispensary assistant employed in a retail pharmacy setting in Johannesburg. Your participation will provide valuable information about the perceptions and knowledge of homoeopathy amongst this group.

The research aims to evaluate, through the use of a brief questionnaire, your personal experience of, as well as professional exposure to, the system of homoeopathy and homoeopathic medications. Completion of the questionnaire will take approximately 15 minutes.

The research involves the once-off completion of a standard questionnaire, which consists of 3 sections. Section 1 consists of demographic information, where you will be requested to provide details such as your age, qualifications, gender and work experience in order to aid in the statistical analysis of the data. Section 2 deals with your personal experience and understanding of homoeopathy. Finally, section 3 aims to evaluate your daily dealings with homoeopathy at work within the pharmacy setting.

Your participation in this survey is entirely voluntary and anonymous. No identifying data will be included with your completed questionnaire. As such, participation in this research study carries no risk for the participant.

The information that you provide through this survey will be valuable in evaluating the

relationship between pharmacists and homoeopathic/ complementary medicine. Your opinion will help to improve communication and understanding between these two fields of medicine.

A copy of this consent form will be signed and made available to you if requested. Any and all information will be confidential. The contact details of the researcher and supervisors involved in the study can be found at the bottom of this form, and you are free to receive any information regarding the study at any time.

As a participant in this study, you are asked that all information given by you is true and an honest reflection of your opinions and experiences.

I, the participant, have been fully informed of the details of the research study. I understand that my participation is voluntary and therefore, that I may withdraw from and discontinue with my involvement in the study at any time. I understand that I am free to ask any questions about the research and that the researcher will answer these to the best of her ability.

Date: _____

Signature: _____



I, the researcher, have fully explained the procedures involved in this study and the purpose of the information required. I will answer any and all questions that participants may have to the best of my ability.

Date: _____

Signature: _____

Contact Details:

Researcher:

Taryn Mann
Cell: 083 445 6976

Supervisor:

Dr. K.S. Peck
Cell: 082 824 2280

Co- Supervisor:

Dr. M Cape
Cell: 083 981 3426

APPENDIX B

SURVEY QUESTIONNAIRE

A. DEMOGRAPHIC INFORMATION:

1. Age: _____ years
2. Pharmacy: _____
3. Gender:
Female Male
4. Race: _____
5. Area in which pharmacy is situated: _____
6. Please list your highest qualification in pharmacy:

7. From which institution did you receive this qualification?

8. For how many years have you been working in a retail pharmacy environment?
_____ Years
9. In what year did you qualify?

B. PERSONAL EXPERIENCE AND UNDERSTANDING OF HOMOEOPATHY:

1. During the course of your studies, did you receive any training with regard to Homoeopathy?
Yes No
2. During the course of your studies, did you receive any training with regard to Complementary/ alternative medicine?
Yes No
3. Do you feel that this sort of training is useful and/ or of interest to pharmacy students?
Yes No
4. Have you ever received training from a homoeopathic pharmaceutical company with regards to their products?
Yes No
5. If so, please list the companies that have provided this training:-

6. Do you feel training by these companies is or would be useful to you?

Yes No Not sure

7. Have you or anyone in your family ever consulted a homoeopathic practitioner?

Yes No

8. If you answered yes, do you/ they feel the treatment received was satisfactory?

Always Most of the time Seldom Never

9. Have you ever personally used Over-The-Counter homoeopathic medication?

Yes No

10. If you answered Yes to (9) above, for which conditions have you used them?

Condition:	Yes	No
Sinusitis		
Common cold/ influenza		
Skin conditions e.g. eczema		
Physical injuries		
Stress/ Depression		
Hormonal conditions		
Fatigue		
Weight loss		
Cardiovascular conditions		
Headaches		
Arthritis/ rheumatism		
Haemorrhoids		
Fever		

Other (please specify): _____

11. To what extent do you agree with the following statements:-

	Totally Disagree	Disagree	Neutral	Agree	Totally Agree
a. Homoeopathic medication is effective.	1	2	3	4	5
b. Homoeopathic medication is only effective due to the placebo effect.	1	2	3	4	5
c. Homoeopathic medication has no side effects.	1	2	3	4	5
d. Homoeopathic and Herbal medications are the same thing.	1	2	3	4	5
e. Homoeopathic medication works well in conjunction with conventional medicine.	1	2	3	4	5
f. Homoeopaths are clinically trained to make a medical diagnosis.	1	2	3	4	5
g. Homoeopathic medication is useful in physical conditions.	1	2	3	4	5
h. Homoeopathic medication is useful in mental conditions.	1	2	3	4	5
i. Homoeopathic medication is useful in emotional	1	2	3	4	5

conditions.					
j. Homoeopathic medication takes a long time to work.	1	2	3	4	5
k. Homoeopathy conflicts with my religious beliefs (Manga; 2007).	1	2	3	4	5

C. EXPOSURE TO HOMOEOPATHY IN THE WORK PLACE:

1. Does your pharmacy stock Homoeopathic medication?

Yes No Not Sure

2. Does your pharmacy stock herbal/ naturopathic medication?

Yes No Not Sure

3. How often are you asked for advice on Homoeopathic medication?

Daily Several times a week Once a week
 Less than once a week Never

3. If you are not responsible for homoeopathy in your pharmacy, who is? _____

4. Do you feel confident about your ability to provide adequate advice and information about Homoeopathic medication?

Yes No Not sure

5. Do you feel that there is a use for Homoeopathy in a pharmacy setting in general?

Yes No Not Sure

6. Do you ever recommend Homoeopathic medicines to your customers?

Yes No

7. Is the sale of Homoeopathic medications an important source of income for your pharmacy?

Yes No Not Sure

8. Why do you believe some customers prefer Homoeopathic medication?

	Yes	No
a) Cost		
b) Easily obtained (i.e. unscheduled)		
c) Religious beliefs		
d) Disillusionment with conventional medicine/ doctors		
e) Safety i.e. lack of side effects		

9. Why do you believe some customers avoid using Homoeopathic medication?

	Yes	No
a) Skepticism about efficacy		
b) Concerns about quality		
c) Not covered by medical aid		
d) Not well researched		
e) Not well understood		

10. Do you feel that homoeopathic medicines should be an option in prescribed minimum benefits?

Yes No Not Sure



APPENDIX C

FREQUENCY TABLES

Table 1: Gender representation of survey participants

(N=50)

Gender	Frequency	Percent
Male	22	44%
Female	28	56%

Table 2: Race representation of survey participants

(N=49)

Race	Frequency	Percent
Indian	2	4.08%
Asian	1	2.04%
Black	4	8.16%
White	39	79.59%
Unknown	3	6.12%

Table 3: Pharmaceutical Qualification of survey participants

(N=50)

Qualification	Frequency	Percent
Bachelor of Pharmacy	18	36%
N. (Dip) Pharmacy	9	18%
Post Basic Pharmacist Assistant	9	18%
Pharmacist Assistant	12	24%
Pharmacy Student	2	4%

Table 4: Qualification Category of survey participants

(N=50)

Category	Frequency	Percent
Pharmacist	27	54%
Pharmacist Assistant	23	46%

Table 5: Qualifying Tertiary Institution

(N=49)

Tertiary Institution	Frequency	Percent
Health Science Academy	9	18.37%
University of North West Province	4	8.16%
University of Port Elizabeth	2	4.08%
Potchefstroomse Universiteit vir Christelike Hoër Onderwys	3	6.12%
University of the Witwatersrand	16	32.65%
Pharmacy Council	8	16.33%
University of Potchefstroom	1	2.04%
Rhodes University	2	4.08%
S Buys Training and Development Academy	1	2.04%
Sector Education and Training Authority (SETA)	1	2.04%
Technical College of Johannesburg	1	2.04%
University of Durban Westville	1	2.04%

Table 6: Average Age of survey participants

(N=50)

	Years
Minimum Age	20
Mean Age	37.54
Maximum Age	76

Table 7: Accumulated Work Experience (5 years increments)

(N=48)

Years	Frequency	Percent
1-5	11	22.92%
6-10	11	22.92%
11-15	12	25%
16-20	4	8.33%
21-30	7	14.58%
>31	3	6.25%

Table 8: Year in which participant qualified in pharmacy

(N=41)

Year of Qualification	Frequency	Percent
<1980	9	21.95%
1980- 1989	4	9.76%
1990- 1994	5	12.20%
1995- 1999	8	19.50%
2000- 2004	7	17.00%
2005- Present	8	19.50%

Table 9: Homoeopathy training during the course of normal studies: Comparison according to work experience

(N=48)

Received or Not	Frequency	Percent
Yes (1-5 years)	5	45.50%
No (1-5 years)	6	54.50%
Yes (6-10 years)	6	54.50%
No (6-10 years)	5	45.40%
Yes (11-15 years)	6	50.00%
No (11-15 years)	6	50.00%
Yes (16-30 years)	3	27.30%
No (16-30 years)	8	72.70%
Yes (>31 years)	1	33.30%
No (>31 years)	2	66.70%

Table 10: Complementary medicine training during the course of normal studies: Comparison according to work experience

(N=46)

Received or Not	Frequency	Percent
Yes (1-5 years)	7	63.60%
No (1-5 years)	4	36.40%
Yes (6-10 years)	7	63.60%
No (6-10 years)	4	36.40%
Yes (11-15 years)	4	36.40%
No (11-15 years)	7	63.60%
Yes (16-30 years)	3	27.30%
No (16-30 years)	8	72.70%
Yes (>31 years)	0	0.00%
No (>31 years)	2	100.00%

Table 11: Frequency of homoeopathic companies providing training to pharmacists and pharmacists' assistants

Company	Count
Bioharmony	2
Boiron	5
Erex	1
Flordis	1
Heel	8
Kenza	1
Lennon's	1
Natura	15
Pegasus	3
Pharma Natura	15
Pharmachoice	1
Tilob	2
Foodstate	1
Wala	1
Vogel/ Bioforce	4

Table 12: Frequency of use of homoeopathic medication in common illness

Condition	Count
Sinusitis	21
Common cold/ influenza	25
Skin condition	10
Physical Injury	15
Stress/ depression	13
Hormonal conditions	6
Fatigue	8
Weight Loss	9
Cardiovascular Disease	4
Headaches	6
Arthritis/ Rheumatism	6
Haemorrhoids	2
Fever	1
Asthma	1
Indigestion	1
Insomnia	2
Oral thrush	1
Swelling and Shock	1
Vertigo	2

Table 13: Significant difference between homoeopathic medication use between men and women in the treatment of headaches

(N=14)

Gender	Frequency	Percent
Male (yes)	0	0.00%
Male (no)	5	100.00%
Female (yes)	6	66.70%
Female (no)	3	33.30%

**Table 14: Homoeopathy as an important source of income for pharmacies:
Comparison between pharmacists and pharmacists' assistants**

(N=49)

Category	Frequency	Percent
Pharmacist (yes)	17	63.00%
Pharmacist (no)	10	37.00%
Pharmacists' assistants (yes)	6	27.30%
Pharmacists' assistants (no)	16	72.70%

**Table 15: Homoeopathy as an important source of income for pharmacies:
Comparison according to work experience**

(N=47)

Work Experience	Frequency	Percent
Yes (1-5 years)	3	70.00%
No (1-5 years)	7	30.00%
Yes (6-10 years)	4	36.30%
No (6-10 years)	7	63.70%
Yes (11-15 years)	6	50.00%
No (11-15 years)	6	50.00%
Yes (16-30 years)	6	54.60%
No (16-30 years)	5	45.40%
Yes (>31 years)	3	100.00%
No (>31 years)	0	0.00%

Table 16: Customers prefer homoeopathy because of disillusionment with conventional medicine

(N=43)

Category	Frequency	Percent
Pharmacists (yes)	23	95.80%
Pharmacists (no)	1	4.20%
Pharmacists' assistants (yes)	13	68.40%
Pharmacists' assistants (no)	6	31.60%

Table 17: Customers avoid homoeopathy because of concerns about quality

(N=40)

Category	Frequency	Percent
Pharmacists (yes)	10	47.60%
Pharmacists (no)	11	52.40%
Pharmacists' assistants (yes)	15	79.00%
Pharmacists' assistants (no)	4	21.00%

Table 18: Homoeopathic medicine as an option in Prescribed Minimum Benefits: Comparison according to qualification

(N=49)

Category	Frequency	Percent
Pharmacists (yes)	18	66.70%
Pharmacists (no)	9	33.30%
Pharmacists' assistants (yes)	12	54.50%
Pharmacists' assistants (no)	10	45.50%

**Table 19: Homoeopathic medicine as an option in Prescribed Minimum Benefits:
Comparison according to work experience**

Work Experience	Frequency	Percent
Yes (1-5 years)	4	40.00%
No (1-5 years)	6	60.00%
Yes (6-10 years)	7	63.60%
No (6-10 years)	4	36.45%
Yes (11-15 years)	7	58.30%
No (11-15 years)	5	41.70%
Yes (16-30 years)	10	90.90%
No (16-30 years)	1	9.10%
Yes (>31 years)	1	33.30%
No (>31 years)	2	66.70%

