Experiences of South African dentists towards compulsory community service.

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A research report submitted to the Department of Community Dentistry, School of Oral Health Sciences, Sefako Makgatho Health Sciences University, Pretoria, in partial fulfilment of the requirements for the

Degree of

Master of Dental Science (MDS)

Pretoria, 2018
DECLARATION

I, Motimedi Lesley Machete, hereby declare that this research report is my own work. It is being submitted for the degree of Masters of Dental Sciences at Sefako Makgatho Health Sciences University, Pretoria. It has not been submitted or presented for any degree or examination at this or any other university and that all sources have been indicated and acknowledged by means of complete references.

........day of .........................2018
DEDICATION

To my family, friends and colleagues for their help and support.
ABSTRACT

BACKGROUND: Section 27 1(a) of the constitution of South Africa (S.A) provides legal impetus for state to deploy health professionals including dentists to compulsory community service (Comm Serve). Compulsory community service was introduced 16 years ago with mixture of benefits and challenges to participants. There has not been any recent evaluation about the successes of the programme. The study sought to assess the knowledge, explore the attitudes and perceptions and to ascertain benefits realized and challenges faced by dentists following Comm Serve.

AIM: The purpose of this study was to explore the experiences (understanding, attitudes and perceptions, benefits and challenges) of South African dentists following compulsory community service.

OBJECTIVES: 1) To assess the knowledge of dentists about compulsory community service, 2) To explore the attitudes and perceptions of dentists regarding compulsory community service and 3) To ascertain benefits realised and challenges faced by dentists during Comm Serve.

METHODS: Cross-sectional study of S.A dentists who had completed Comm Serve was undertaken. A structured questionnaire for quantitative survey was used to collect data on biographic information, knowledge, attitude and perceptions, benefits and challenges also procedures performed. The proposed sample size is 196, anticipating non-responders the sample size was increased by 20% to 235.
RESULTS: The overall response rate is 108% (254/235). The study participants were black African (78%), Female (58.6%) of whom (70.5%) were unmarried and below the age of thirty five (69%). The knowledge of dentists about Comm Serve programme (CSP) was poor (77.2%). The dentists also had a negative perception (50.4%) about programme. However (86.2%) participants reported the benefits of Comm Serve. The clinical procedure performed the most was dental extractions (63.8%).

CONCLUSION: Dentists in S.A appear to have poor knowledge about the moral, legal and ethical significance of CSP. Programme is still fraught with serious challenges including issues of placement, administrative support, and management. Despite these challenges majority of dentists identified positive benefits derived from participating in Comm Serve. Compulsory community service programme for dentists is demonstrating to be clinically regressive which suggests that the policy needs to be reviewed.
ACKNOWLEDGEMENT

I would like to thank the almighty God for giving me the strength to undertake this study. My sincere acknowledgement goes to my supervisor Dr Pagollang Motloba for his exceptional guidance and vital comments during the whole research period. I am also grateful for the valuable feedbacks I received from my co-supervisor Dr Nokukhanya Makwakwa, whose assistance, encouragement, patience and guidance are greatly commendable. Their continuous encouragement, patience, and guidance and also prompt and sound input during the research.

The late Dr Abdulla Khan for playing a fatherly role and nurturing me well into the discipline. May his soul rest in peace.

To all my colleagues who assisted me with data collections.

The participants who took part in the study by sharing their personal experiences with us. Their contributions are highly appreciated.

Special thanks to my wife Rea and children Tshego and Lesley Jnr for adaptation towards spending lesser time with me. It must have been cold there in your shadow. I wish to thank my parents (Matsapola & Mampoele), including all family members and friends for their support and supporting me to follow my dreams.

Thank you all for your contributions in different degrees, if you are not mentioned here just know that it wasn’t deliberate. You still have special place in my heart.
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<th>Description</th>
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<tbody>
<tr>
<td>BHF</td>
<td>Board of Healthcare Funders</td>
</tr>
<tr>
<td>Comm Serve</td>
<td>Compulsory community service</td>
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<tr>
<td>Cso</td>
<td>Community service officer</td>
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<td>Csp</td>
<td>Community service programme</td>
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<tr>
<td>DoH</td>
<td>Department of Health</td>
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<tr>
<td>DPA</td>
<td>Dental Professional Association</td>
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<tr>
<td>HCP</td>
<td>Health Care Professionals</td>
</tr>
<tr>
<td>HPCSA</td>
<td>Health Professions Council of South-Africa</td>
</tr>
<tr>
<td>S.A</td>
<td>South Africa</td>
</tr>
<tr>
<td>SADA</td>
<td>South African Dental Association</td>
</tr>
<tr>
<td>SMU</td>
<td>Sefako Makgatho Health Sciences University</td>
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<tr>
<td>SMUREC</td>
<td>Sefako Makgatho Health Sciences University Research Ethics Committee</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical package for Social Science</td>
</tr>
<tr>
<td>Wits</td>
<td>Witwatersrand University</td>
</tr>
<tr>
<td>UP</td>
<td>University of Pretoria</td>
</tr>
<tr>
<td>UL</td>
<td>University of Limpopo/ Medunsa</td>
</tr>
<tr>
<td>UWC</td>
<td>University of Western Cape</td>
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<td>REME</td>
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**Key words:** Community service programme, Dentistry, Concordance
CHAPTER 1: INTRODUCTION

1.1 Background

Compulsory community service (Comm Serve) refers to the compulsory service that health care professionals are compelled to perform at public health care facilities, after they have successfully completed their diploma or degree course (DoH, 1997). The successful completion of the one-year community service is a requirement for registering with Health Professions Council of South Africa (HPCSA) as a dentists (Health Professions Act, 1974).

Compulsory community service for all health professionals was introduced by the state in order to address one of the most fundamental human rights enshrined in our constitution. Section 27(1) (a) of the constitution of South Africa (SA) states that “everyone has the right to have access to health care services, including reproductive health care.” It was envisaged that the implementation of comm serve would address the problem of the limited health human resources, especially in the rural and far lying areas of the country.

Initially the programme was introduced for medical doctors and dentists, as the need for their services was critically dire. Presently health professionals are expected to undertake Comm Serve in realization of this right to care (DoH, 1997).

Penfield and Rasmussen demonstrated that almost half of both sensory and motor aspects of the brain are devoted to the ‘dental area.’ So, approximately half of the
programming of the computer-brain that runs the body, comes from the dental system (Fonder, 1988). It is therefore imperative to understand the perspectives of the people (dentists) who are tasked to maintain the balance between the brain and the body by providing their services (Glastier, 2012).

1.2 Community service placement

In SA, Comm Serve following medical training serves as a mechanism for equitable distribution of health professionals and their professional development. Community service dentists (CSD) are required to contribute a year towards serving in a public health facility while receiving remuneration and under supervision. Although the SA community service programme (csp) has been in effect since 1998, little is known about how placement and practical support occur, or how Comm Serve may impact future retention of health professionals (Hatcher et al., 2014).

Policies differ with regard to Comm Serve from one province to another in SA. In KwaZulu-Natal, a detailed plan has been compiled with the purpose of optimising the contribution of community service officers (Cso) to health service delivery. It will ensure that 90% Cso posts are filled each year. All community service officers undergo a structured orientation programme within two weeks of their arrival. The plan contains detailed guidelines for accommodation, training, supervision, and mentorship. The plan is seen as important for the retention of community service officers in rural, underserviced areas after their placement (Kissoon-Singh, 2001).
Apart from the Northern Cape, a 63% to 88% decrease in the amount of community service health professionals was experienced in every other province in SA during 2008 (George et al., 2009).

1.3 Problem statement

Oral health in SA and many parts of the world does not enjoy the same consideration and recognition as medicine. This is despite a compelling case that oral health diseases remain a major public health problem because of their high prevalence, severity, and impact on individual quality of life (Singh, 2011, Singh et al., 2010, van Wyk and van Wyk, 2004). It is consequently arguable that, Comm Serve for dentists was largely a procedural add-on, and a policy requirement to be fulfilled. Based on how this programme has been implemented and supported, it is contestable if it was well-conceived, planned and executed. For most part, the evaluation of Comm Serve for dentists has been coupled to that of medical doctors. While it is prudent and efficient, to do so, some nuances affecting dentists have been overlooked and underappreciated in the process. For examples, logistics, operational issues, allocation of resources, support, and management of dentists and medics seems to differ, especially during Comm Serve year.
1.4 Purpose of the study

1.4.1 Research question

1) What is the knowledge, perceptions and attitudes of South African dentists regarding compulsory community Service?

2) What were the benefits and challenges experienced during the compulsory community Service programme?

1.4.2 Aim

The aim of the study was to explore the experiences (understanding, attitudes and perceptions, benefits and challenges) of South African dentists following compulsory community service.

1.4.3 Objectives:

The objectives of the study were to:

1) To assess the knowledge of dentists about compulsory community service.

2) To explore the attitudes and perceptions of dentists regarding compulsory community service.

3) To ascertain benefits realised and challenges faced by dentists during compulsory community service.

1.5 Significance of the study

There is dearth of knowledge from literature about the subject matter. This study is aimed at exploring experiences of dentists who participated in a yearlong compulsory
community service programme in public health facility. As part of the study, matters related to support, operations, resources etcetera will be interrogated as part of the community service for dentists.

Therefore the study sought to add to the body of knowledge about the subject. The findings will provide recommendations to the implementation strategies especially in relation to Human Resource challenges in SA.

1.6 Justification

Since the inception of Comm Serve for dentists in SA in the year 2000, there has not been a study to evaluate what the issues are concerning csp from the end users (dentists).

Based on how this programme has been implemented and supported, it is contestable if it was well-conceived, planned and executed. For most part, the evaluation of Comm Serve for dentists has been coupled to that of medical doctors. Therefore it is important to evaluate Comm Serve programme for dentists solely as some nuances affecting dentists have been overlooked and underappreciated in the process. For examples, logistics, operational issues, allocation of resources, support furthermore, management of dentists and medics seems to differ, especially during Comm Serve year.
1.7 Outline of the Dissertation

This dissertation consists of five chapters. Chapter 1 serves as an introduction to the dissertation, which includes the background and rationale, the stated problem statement, Research purpose, objectives, Research question, of the study and delimitation and limitations. It will also include an overview of the significance of the study. Chapter 2 focuses more on literature relating to the study. Chapter 3 discusses methodology used in this study in details. This includes the Study design, Research approach, Study Population, Inclusion and Exclusion Criteria, Sampling and Sample size (estimation of sample size and sample procedure), Data collection (data collection instrument and data collection process), Data analysis, Ethical consideration and Bias and validity.

Chapter 4 begins with an introduction followed by the results and discussions. Chapter 5 which is the last chapter concludes the dissertation with the limitations of the study, provides recommendation for future studies and conclusion.
CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Chapter 2 provides a review of relevant literature obtained from different studies relating to this specific topic.

Health Professions Amendment Act of (1997) legislated comm serve for all health professionals as described in the *Medical, Dental and Supplementary Health Service Professions Amendments Act* (89 of 1997). Medical doctors, followed by dentists and pharmacists commenced with community services in 1998, 2000 and 2001 respectively (Reid, 2002). This program is still operational today, but has expanded to include other health professionals.

Section 27(2) of the Bill of Rights, provides for the state to “take reasonable legislative and other measures, within its available resources to achieve the progressive realization of each of these rights.” It is in this spirit that the state deemed it legally and morally justifiable that the state introduced Comm Serve for health professionals. The Department of health (DoH), through Comm Serve, sought to address the following concerns to improve the provision of health services to all citizens in South Africa (Reid, 2002).

- To improve the clinical skills of newly qualified health professionals.
- To allow the acquisition of knowledge and further knowledge obtained from universities.
• To change behavior patterns and stimulate critical thinking of newly graduated professionals.

• To address the problem of the emigration of qualified health professionals.

• To address the lack of doctors/dentists working in public service rural hospitals.

• To develop clinical skills appropriate for practicing in rural area and

• To increase the human resource capacity in the public sector.

• To a certain extent issue of emigration has been curbed. Issue of human resource capacity is also kept under control to some extent.

2.2 Historical background of Community service

Community service programmes have existed since the early 20th century. Various nomenclatures have been used for these programmes, including ‘obligatory’, ‘requisite’ and ‘coercive programmes. Literature shows evidence of programmes in the Soviet Union in 1920, Mexico in 1936 and in Norway in 1954 (Frehywot et al., 2010).

Several African states such as Ghana, Nigeria, Kenya, Mozambique and Zambia also have comm serve programme. These programmes were initiated at various periods, for example Nigeria initiated its programme in 1975 whilst Ghana 2009 (Frehywot et al., 2010). The programmes differ in operation from country to country. Some countries provide incentives that are family-and resource-linked, such as housing in Kenya and Mozambique (J Ferro, Dean Catholic University, Beira, personal communication), and lower car loan rates and children’s scholarships in Zambia, to encourage the graduate to stay in remote area after the compulsory service periods ends.
South Africa’s Comm Serve programme licenses a professional to register as an independent practitioner with HPCSA.

All these different programme names refer to a country’s law or policy that governs the mandatory deployment and retention of a health worker in the underserved and/or rural areas of the country for a certain period of time.

These programmes are all governed by some type of regulation, ranging from parliamentary law to a policy within the ministry of health. Depending on the country, doctors, nurses, dentists and other types of professional allied health workers are required to participate in the programme.

Compulsory service programmes are an instrument of social justice, an exercise in health equity, in that they enable governments to direct or augment health services to geographical areas that are not well served and in communities that are not favored by market forces and health worker preferences. The premise that underlies most compulsory service programmes (except condition of service programmes) is that government-sponsored education of a health professional provides that individual with a critical skillset valuable to all members of society. Since it has been given to the individual at little or no cost, the individual therefore has incurred a debt to the country and a period of clinical pay-back is warranted (Frehywot et al., 2010).
2.3 Oral health in South Africa

Various studies conducted in SA have showed that 60% of primary school children had dental caries, and 80% of the caries remains untreated (Molete et al., 2016, Mothupi et al., 2016, van Wyk and van Wyk, 2004). The consequence of untreated dental caries results in pain, disability and a poor quality of life (Jackson et al., 2011). Furthermore dental caries is associated with poor school performance, discomfort, inability to eat, sleep and concentrate. Children with poor oral health status are also three times more likely than their counterparts to miss school as a result of dental pain (Jackson et al., 2011). Hence the Department of Health came up with a white paper which documents which defines a basic primary oral health care package that should be provided at all primary health care facilities (DoH, 1997).

The white paper states that oral health services should be integrated with other health services at all levels of care. The focus of oral health care should change towards prevention and promotion with emphasis on water fluoridation.

2.3.1 Oral Health Promotion and Education

Basic primary oral health care services that will “provide substantial returns in health in terms of gains in health outcome” must at least consist of the following: Promotive and primary preventive oral health services. There is enough evidence to show that ongoing programmes of oral health promotion and education can play a significant role in improving the knowledge of people (DoH, 1999).
2.3.2 Basic Oral Health Care Package

Basic treatment (curative oral health) services that have been recommended in the basic oral health care package (DoH, 1997); are as follows:

(i) An annual examination

(ii) Bitewing radiographs,

(iii) Scaling and Polishing(Cleaning of teeth)

(iv) Simple (1-3 surface) fillings (Restorations),

(v) Fissure sealants

(vi) Emergency relief of pain and sepsis.

2.3.3 Financial Resources

The national Directorate: Oral Health has its own budget. Oral health at provincial level should have cost centers for budgeting purposes. They have to, according to the Medium-Term Expenditure Framework (MTEF), budget for oral health service delivery. Financial management must comply with the Public Finance Management Act (PFMA), 1999 (Act No. 1 of 1999).

For the upgrading and refurbishing of oral health facilities and equipment, provinces have to budget through the MTEF, according to the needs determined by the provincial oral health programme managers in each of the provinces. The provinces will be responsible for the capital expenditure and appropriate equipping of dental facilities in health facilities.
2.3.4 Guideline for oral health personnel

The draft policy document (DoH, 1999) recommends that dentists, dental therapists, oral hygienists, dental assistants and health promoters are required to provide oral health care within the districts health system. A referral system should be established for specialized services.

2.3.5 Basic primary oral health care services

The following guidelines will be used for the deployment of oral health personnel for the delivery of Primary oral health care:

Table 1: Basic primary oral health care services

<table>
<thead>
<tr>
<th>Level</th>
<th>Institution</th>
<th>Function</th>
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<tr>
<td>Primary</td>
<td>Clinic</td>
<td>- Health promotion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- School oral health programs - preventive services like fluoride rinsing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Basic emergency oral health services - referral to health Centre.</td>
</tr>
<tr>
<td>Primary</td>
<td>Health Centre</td>
<td>- Health promotion</td>
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<tr>
<td></td>
<td></td>
<td>- School oral health programs.</td>
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<tr>
<td></td>
<td></td>
<td>- Preventive measures including fissure sealants etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Basic curative services - referral to district hospital</td>
</tr>
<tr>
<td>Primary</td>
<td>District Hospital</td>
<td>Referral Centre</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- All procedures that can be carried out by a dentist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Referral to regional hospital</td>
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</table>

Source: (DoH, 2005)

2.4 Compulsory community service in South Africa for dentists

The democratically elected government that assumed leadership of South Africa in 1994 inherited a health care system dominated by a curative, hospital-centric approach and characterised by fragmentation, inequality, duplication and poor co-ordination of services.
The gross inequalities in resource allocation between public and private sectors and across provinces resulted in the majority of the population being under-served in terms of health care. Human resourcing of certain medical professionals (doctors, dentists and pharmacists) favoured the private sector and within the public sector, provinces with large urban hospitals attracted more staff (van Stormbroek and Buchanan, 2016).

In light of the above historic injustices compulsory community service in SA was implemented in 1998 as a means to retain health workforce as well as overcoming mal-distribution of health personnel.

The first group of 173 dental graduates began their comm serve in July 2000, and were allocated to sites in all 9 provinces as well as the SA Military Health Service. Nearly a quarter (22%) of the first group of dental graduates in 2000 that were eligible, decided not to partake in community service and presumably left the country (Naidoo and Chikte, 2002).

2.5 Experiences of Health professionals undertaking compulsory community service

Various studies have explored Comm Serve carried out by different categories of health professionals registered with the HPCSA. A national cross-sectional study, found that medics and dentists were extremely satisfied with Comm Serve; benefitted from professional development during their tenure, and supported the roll-out of this program especially in underserved areas (Hatcher et al., 2014).

The first evaluation of community services by clinical psychologists, was undertaken by (Pillay and Harvey, 2006), the outcomes of this study confirmed that participants of this
programme recognized that providing necessary care was a necessary civic duty. In addition, they recognized their development during community service. Most confirm that they gained confidence and developed professionally (Pillay and Harvey, 2006).

Dieticians, speech, hearing and language therapists indicated strongly that support and supervision was lacking during community service; infrastructure was not commensurate with their knowledge and expectation; and communication was challenging given language differences (Khan et al., 2009, Parker et al., 2013, Visser et al., 2006). All studies reviewed point to a mixture of benefits and challenges during this service years.

Largely, the experience of most health professional was positive, most developed clinical and social skills; most have exited the programme more confident in clinical decision-making and treatment of patients (Reid, 2002). Literature supports, the value of Comm Serve policy as a sound government initiative, with potential to redress inequality in health and hone clinical and social skills of participants. However, without addressing challenges such as supervision, poor infrastructure, and lack of technology, envisaged outcomes will never be achieved (Reid, 2002). There have been attempts to address challenges plaguing the programme. Thus far evidence suggests that Comm Serve is far from being a functional programme.
2.6 Experiences of dentists undertaking compulsory community service

Experiences refers to the skills and knowledge that a person or individual gain from performing a duty or an activity (Longman Dictionary: For Advanced Learners, 2009). In this study, it refers to the experience Community service dentists gained during their community service year in South Africa.

A study by (Naidoo and Chikte, 2002) documented the experiences of dental students after having completed their comm serve. The results showed that 54% of the dentists could speak the local language; almost half (45%) felt that the allocation process was not handled efficiently and 26% did not have access to telephone or fax.

Half of the students (52%) were provided with accommodation while the other half (48%) had to organise accommodation on their own. In terms of the equipment and resources that were available; almost 25% of the dentists indicated that they did not have full sets of instruments; 10% did not have an autoclave or a high-speed hand piece while 50% reported that the equipment broke down often and was not fixed promptly. As a result of this, more than 90% felt that they needed a short course in equipment maintenance and repairs.

The first review of comm serve concluded that dentists responded with mixed feelings towards the programme. The study also reported that, almost two thirds of the dentists said that they had enjoyed their work environment. However, more than three quarters (76%) felt that their clinical competence in some dental procedures (orthodontics, prosthodontics and restorative dentistry) had been reduced (Naidoo and Chikte, 2002).
Harris and Zwane (2004), examined career satisfaction of community service dentists and showed that there had been a drop in career satisfaction during the yearlong comm serve. This confirmed the results of (Naidoo and Chikte, 2002) who reported that many of the dentists who had performed comm serve had problems with one or more of the many aspects involved in the planning, introduction and service rendering of comm serve.

Compulsory community service for dentists is experiencing the worst challenges compared to the medical counterparts. Firstly, Oral health is expensive to administer, especially if alternative services are to be made available (Reid, 2002). Secondly, it seems as if there is a huge misunderstanding by hospital management what the role of oral health is, within the healthcare services (Thema and Singh, 2013). As a result and most consistently, hospital management do not prioritize oral health, and are likely to under budget for this service. Consequently, dental services are relegated to the background and are reduced to an emergency service to manage largely pain and sepsis (Thema and Singh, 2013).

Curative and rehabilitatory oral health services are largely missing within the public oral health service. This status quo, is in stark contrast to expectations of dental graduates, who have acquired skills in modern dentistry, which is largely high-tech, with unlimited possibility to provide state-of-the-art oral health care. The public sector cannot afford the costs of dental care in the midst of competing need (Reid, 2002).
No literature could be found that fully explores the challenges and benefits of comm serve as experienced by dentists in this country. Studies reviewed have been general, and present less comprehensive data to make reliable recommendations about this program (Khan et al., 2009; Naidoo and Chikte, 2002; Reid, 2002).

2.7 Dentists’ knowledge about compulsory community service

Knowledge is “the facts, feelings or experiences known by a person or group of people; awareness, consciousness, or familiarity gained by experience or learning; specific information about a subject” (Collins English Dictionary, 1991). Knowledge can be gained through experience, the media and interaction with others, like friends, colleagues, health workers and parents. Knowledge can be factual or myth depending on the source of the information. There are five forms of knowledge: conceptual, declarative, episodic, procedural and descriptive knowledge (Byrnes, 2001, Kunda, 1999).

Kunda, stated that conceptual knowledge is used to represent an object or phenomenon. (Kuanda, 1999) while (Byners, 2001) defines conceptual knowledge as a “form of comprehensive understanding of what the phenomenon is all about.” This implies that individuals possessing this knowledge would be able to rationalise the cause and effect of the processes in that phenomenon.

In this study, conceptual knowledge of comm serve pertains to the fundamentals of the programme including the actual process of allocations to the sites, the objectives and the criteria used for allocation.
Conceptual knowledge also includes knowing that the comm serve programme is government law. That means it must be done. Once the law is passed by parliament it becomes binding.

In this study, conceptual knowledge of comm serve pertains to the fundamentals of the programme including the actual process of allocations to the sites, knowing that the comm serve programme is government law.

Descriptive knowledge has also been defined as the precise account of the problem and the information presented at this level should lead to the understanding of the situation at that point in time (Yegidis et al., 2017). In this study dentists with descriptive knowledge would know why the government introduced this programme and for how long is it going to run. Dentists would also know that they are key stakeholders and the success of this programme depends on how they respond to the task.

2.8 Dentists’ perceptions regarding compulsory community service

According to the Concise Oxford Dictionary (1999), perception refers to a way of regarding, understanding or interpreting something. Perception is also defined as an organised process in which an individual interprets situations from an environment and draws subjective and personal inferences and conclusions from these in order to take certain actions or behaviours (George et al., 2009).

This means we are going to get the views straight from the end users (dentists) who participated in the programme and how they responded to that challenge.
In the current study, perceptions refer to the ways dentists in SA regard, understand and interpret facts regarding comm serve programme. The ability to see, hear and understand things may improve one's powers of perception.

2.9 Dentists’ attitudes regarding compulsory community service

Attitude is an enduring response towards persons, objects and ideas, it can be portrayed by a mental and neural state of readiness, organised through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related (Taylor et al., 2006). Attitude is “someone’s opinion or feelings about something, especially as shown by their behaviour” (Macmillan English Dictionary 2006:76). Therefore attitude refers to the way of thinking and behaving.

In this study, attitudes refer to dentists’ opinions or feelings about Comm Serve programme. A dentist may react positively or negatively to the government programme especially if the reasons for the programme to exist are not thoroughly explained or explicit. Attitude being an enduring response can be assumed that it does not change over a period of time. Thus, when dentists learn the right attitudes regarding Comm Serve and know their social responsibilities and towards their communities, such attitudes can be maintained over a long time period.
2.10 How dentists accounts for social responsibility: economic imperatives and professional obligations

The concept of social responsibility has been considered in education and moral development, civic engagement, community service, sustainable development, and within the corporate sector and business ethics, however, reference to social responsibility in dentistry has been made usually without a clear explanation of the concept or its application by dentists (Dharamsi et al., 2007).
CHAPTER 3: METHODOLOGY

3.1. Introduction

This study aimed at exploring the experiences (understanding, attitudes and perceptions, benefits and challenges of South African dentists following Comm Serve.

This chapter seeks to describe the methodology used in this study and provides a detailed account of how the researcher went about studying and answering the research question, as well as the methods used during data collection and analysis.

3.2 Study design

The study approach was of mixed methodology, incorporating both qualitative and quantitative measures. The study design was a descriptive cross-sectional survey of dentists in SA using a self-administered structured questionnaire to:

1. Establish the knowledge of dentists about Comm Serve.
2. Explore the attitudes and perceptions of dentists regarding Comm Serve
3. Ascertain the benefits realised and challenges faced by dentists during Comm Serve

3.3 Study setting

The study setting was South Africa (SA), which is officially known as the Republic of South Africa (Mashigea et al., 2013), it is the southernmost sovereign state in Africa. It is bounded on the south by 2,798 kilometres of coastline of Southern Africa stretching along the South Atlantic and Indian Oceans, on the north by the neighbouring countries
of Namibia, Botswana and Zimbabwe, and on the east and northeast by Mozambique and Swaziland, and surrounding the kingdom of Lesotho (fig 1). South Africa is the 25th-largest country in the world by land area, and with a population of approximately 55 million people, is the world's 24th-most populous nation.

The World Bank classifies South Africa as an upper-middle-income economy, and a newly industrialized country. Its economy is the second-largest in Africa, and the 34th-largest in the world. In terms of purchasing power parity, SA has the seventh-highest per capita income in Africa. However, poverty and inequality remain widespread, with about a quarter of the population unemployed and living on less than US$1.25 a day (TheMarketingSite.com, 2018)

![South African Map](http://maps-africa.blogspot.co.za/2012/05/south-africa-map-pictures.html)

**Figure 1: South African Map**

**Source:** http://maps-africa.blogspot.co.za/2012/05/south-africa-map-pictures.html
3.4 Study population

The study population can be defined as all the individuals who meet the sample criteria for inclusion in a study, and sometimes it is also referred to as the target population (Miot, 2011). The target population comprised of all dentists who underwent compulsory community service in SA since its inception in the year 2000. All participants who satisfied the following inclusion criteria and exclusion criteria participated in the study:

3.4.1 Inclusion Criteria

(i) Completed their studies in one of the South African universities.

(ii) Have undergone compulsory community service in South Africa.

3.4.2 Exclusion Criteria

(i) Dentists who performed Comm Serve in foreign countries.

3.5 Sampling and Sample Size

3.5.1 General population of community service dentists.

All dentists who underwent Comm Serve in the past 15 years. It can therefore be estimated that 3000 dentists would have participated in the programme ever since. On average every school produces approximately 50 dentists per year. Therefore, over the 15 years with a production of 200 dentists per annum, there would be a general population of 3000 dentists who have undertaken compulsory community service.
3.5.2 Estimation of sample size

In order to estimate the sample to this study the following assumptions were made. (a) 15% of dentists were not knowledgeable or had poor experience about the comm serve. This information was extrapolated from similar studies (Govender et al., 2015; Hatcher et al., 2014; Reid, 2002). The level of precision which is confidence interval is placed at 95% and the margin of error that we are willing to commit is 5%, \( \alpha = 0.05 \) by default. The proposed sample size as calculated is 196, anticipating non-response of about 20% we raised the sample size for this study to 235 participants.

The following equation is used to estimate sample size for proportions (Calculator.net)

\[
n = \frac{z^2 \cdot p(1-p)}{e^2}
\]

\( z \): is the z score = 1.96

\( e \): is the margin of error = 0.05

\( N \): is population size = unknown

\( \hat{p} \): is the population proportion = 0.15

\( (1-p)=q = 0.85 \)

Confidence interval = 95%

Estimated sample size was 196

(b) Second equation is similar but takes into consideration \( N \) = the population that is known. The estimation of the sample size was done using Raosoft software. The
software has built in equation. The second equation gave an estimate sample size of 305 at 99% confidence interval (Raosoft, 2004).

\[ X = Z(\frac{\sigma}{100})^2 r (100-r) \]

\[ n = \frac{N X}{((N-1) E^2 + x)} \]

\[ E = \sqrt{\frac{(N-r) X}{n(N-1)}} \]
3.5 Sampling procedure

3.5.1 Recruitment of participants into a data base

(i) National director of oral health provided a list of 9 provincial oral health heads.

(ii) Oral health managers provided a list of HoD’s in various provinces.

(iii) HoD’s provided a list of comm serves in various clinics, health centres and hospitals in the districts.

(iv) Community service dentists provided a list of previous Community service dentists.

(v) Through snowball technique a comprehensive list of comm serve was developed throughout the research process.

(vi) Universities also provided list and contacts of graduates from the year 2000. Hence these individuals were enrolled to participate in this study as and when they were willing and available, non-probability, convenient and snowball sampling techniques were used.

3.6 Data collection

3.6.1 Data Collection Instrument

A semi-structured questionnaire with a combination of both open and closed-ended questions; Yes/No and variables Likert scales was used to evaluate experiences of participants (Appendix A). The questionnaire assessed (i) demographic characteristics, (ii) general information of the comm serve, (iii) attitudes and perceptions regarding
comm serve, (iv) professional and personal benefits acquired from community service programme.

The questionnaire was in English, as participants were expected to have working English language proficiency. In-depth interviews and focus groups had a less structured tool based on the questionnaire. For these two processes an interview guide was developed, comprising of a list of main questions. These questions emanated from cursory analysis of structured questionnaire data. Essentially data collections process was progressive, where each previous data, informed the next phase in order to reach saturation and clarification of issues.

3.6.2 Data Collection Process

After receiving clearance from Sefako Makgatho Health Sciences University Research Ethics Committee (SMUREC) to conduct the survey, data was collected through a process of triangulation. Three distinct techniques were used in this study.

(i) **Self – administered questionnaires** sent to clinics, Health centres and hospital some were hand delivered to the private dentist’s surgeries. To acquire the database of these participants, Dental associations were approached (SADA, DPA, BHF etc.). Furthermore, training institutions were consulted for the lists of qualified dentists. Use of social media, and referrals (snowball sampling was also used to reach many participants as possible).
(ii) **In-depth telephonic interview** were conducted on 10% (23) dentists, who completed the questionnaire. Recruitment of participants was quasi-random, largely purposive and convenient. No formal sampling and recruitment had taken place.

The interview was semi-structured; so as to explore in detail the questions left unanswered or less clarified from the questionnaire.

(iii) **Focus group discussion** was conducted on seven (7) eligible dentists (Lebogang et al., 2014), as they were conveniently available. This focus group discussion was intended to reach consensus on issues raised during the in-depth interviews and self-administered questionnaire. Fortunately the participants were diverse in terms of age, gender, race, place of Comm Serve, etc. This diversity provided rich data.

3.7 Data Analysis

The data was captured, cleaned and reconciled to reduce errors in a Microsoft excel spreadsheet. Thereafter the data was imported into SPSS (version 23) for analysis. Data was first checked for incorrect and missing values before analysis. Descriptive and analytical tools were used for analysis; and ($\alpha = p<0.05$) set as level of significance.

Data from the in-depth interview and focus group were converted into electronic Microsoft word based data. Qualitative analysis of this data was done in NVivo software to establish deep understanding of issues concerning Comm Serve. Data was summarised thematically.
3.8 Bias and Validity

Two distinct threats to validity were applicable in this study, namely random error (chance) and systematic error (bias). To address random error, this study was adequately powered, with sufficient sample size to provide valid results. We further considered possible non-responses and adjusted the sample size accordingly.

Dealing with systematic error or bias, questions and responses from similar studies were considered and incorporated into our data collection tool. This study used triangulation technique for data collection. Inherent in this approach was to reduce bias that could arise from adopting a single measurement tool. Individual measures had been incorporated in each of the measurement tools; participants were protected from unnecessary influence. The in-depth interview, was telephonic, 10% from the total population of 235 (23 participants was considered), once again the participants had some level of control and were not subject to undue coercion and influence. Focus group discussions was conducted by the supervisor and registrar in Community Dentistry Department with ample experience to conduct the focus group discussions impartially.

3.9 Ethical Consideration

The questionnaire (Appendix A) and covering letter (Appendix B) were distributed together explaining the importance of the study. Written consent was obtained or sought from the participants. Privacy and anonymity (Appendix C) was ascertained by concealing the details of participants throughout the conduct of the study (No identity of participants was required in any of the forms.)
During analysis the results were aggregated. The study commenced after ethical collection approval was granted by Sefako Makgatho Health Sciences University Research Ethics Committee (SMUREC) in Augusts 2016 (Appendix D). The SMUREC clearance nr: SMUREC/D/185/2016: PG. It was through this process that further ethical protections for participants were ensured and policed.
CHAPTER 4: RESULTS

Results for South African dentists who participated in Comm Serve.

4.1 Response rate

The sample size as calculated was 235 participants of which 254 participants responded; the figure exceeded our sample size by 19 participants.

4.2 Demographic data

Majority of the participants were black Africans [198 (78%)] (figure 2), below the age of 35 [177(69.7%)], female [149(58.6%)], unmarried [199(78.3%)]. With a minority having children 75(29.6%) (Table 2.1a).

4.2.1 Race of the Participants

Fig 2: Race of the participants
Table 2.1(a): Demographic characteristics of participants

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency (n=254)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤35</td>
<td>177</td>
<td>69.7</td>
</tr>
<tr>
<td>≥35</td>
<td>77</td>
<td>30.3</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>105</td>
<td>41.3</td>
</tr>
<tr>
<td>Female</td>
<td>149</td>
<td>58.6</td>
</tr>
<tr>
<td>Place of Origin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern Cape</td>
<td>6</td>
<td>2.4</td>
</tr>
<tr>
<td>Free State</td>
<td>7</td>
<td>2.8</td>
</tr>
<tr>
<td>Gauteng</td>
<td>67</td>
<td>26.4</td>
</tr>
<tr>
<td>KwaZulu-Natal</td>
<td>28</td>
<td>11.0</td>
</tr>
<tr>
<td>Limpopo Province</td>
<td>87</td>
<td>34.3</td>
</tr>
<tr>
<td>Mpumalanga</td>
<td>22</td>
<td>8.7</td>
</tr>
<tr>
<td>Northern Cape</td>
<td>3</td>
<td>1.2</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>55</td>
<td>21.7</td>
</tr>
<tr>
<td>Unmarried</td>
<td>199</td>
<td>78.3</td>
</tr>
<tr>
<td>Number of Children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>179</td>
<td>70.5</td>
</tr>
<tr>
<td>≥1</td>
<td>75</td>
<td>29.6</td>
</tr>
</tbody>
</table>

4.2.2 Educational and employment status of participants

All the participants answered the question on education and employment sector. Most of the participants were from SMU/UL155 (61%), employed in the public sector 159(62.6%) (Table 2.1b). With few of them having prior qualifications (diploma and degree) 143(56.3%). (Fig 2). Two dentists (0.8%) were unemployed dentists.
Minority of participants in this study had undertaken comm serve in its first five years 51(20.1%) between 2000 and 2005. There was representation from all nine provinces with majority 90 (35.4%) of the participants having completed comm serve in the Limpopo province.

Table 2.1(b): Demographic characteristics of educational and employment status of participants

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency (n=254)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution where dentists qualified</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Pretoria</td>
<td>37</td>
<td>14.6</td>
</tr>
<tr>
<td>Witwatersrand University</td>
<td>25</td>
<td>9.8</td>
</tr>
<tr>
<td>University of Western Cape</td>
<td>37</td>
<td>14.6</td>
</tr>
<tr>
<td>Sefako Makgatho Health Sciences University/University of Limpopo/MEDUNSA</td>
<td>155</td>
<td>61.0</td>
</tr>
<tr>
<td>Year of Qualification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000-2005</td>
<td>51</td>
<td>20.1</td>
</tr>
<tr>
<td>2006-2010</td>
<td>101</td>
<td>39.7</td>
</tr>
<tr>
<td>2011-2016</td>
<td>102</td>
<td>40.2</td>
</tr>
<tr>
<td>Place of Community Service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern cape</td>
<td>7</td>
<td>2.8</td>
</tr>
<tr>
<td>Free State</td>
<td>15</td>
<td>5.9</td>
</tr>
<tr>
<td>Gauteng</td>
<td>36</td>
<td>14.2</td>
</tr>
<tr>
<td>Kwa Zulu Natal</td>
<td>19</td>
<td>7.5</td>
</tr>
<tr>
<td>Limpopo Province</td>
<td>90</td>
<td>35.4</td>
</tr>
<tr>
<td>Mpumalanga</td>
<td>34</td>
<td>13.5</td>
</tr>
<tr>
<td>Northern Cape</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td>North West</td>
<td>51</td>
<td>20.1</td>
</tr>
<tr>
<td>Western Cape</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td>Current employment sector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public sector</td>
<td>159</td>
<td>62.6</td>
</tr>
<tr>
<td>Academic institution</td>
<td>58</td>
<td>22.8</td>
</tr>
<tr>
<td>Private sector</td>
<td>35</td>
<td>13.8</td>
</tr>
<tr>
<td>Unemployed</td>
<td>2</td>
<td>0.8</td>
</tr>
</tbody>
</table>
4.3 Participants’ knowledge about compulsory community service

Knowledge was assessed by assigning a score of 1 to the correct answer and 0 to wrong answer. Four categories were created from these score: 0 to 0, 25; 0, 26-0.5; 0, 51 to 0.75 and 0, 76 to 1. These categories were subsequently dichotomised into two, namely 0 to 0.50 as (no knowledge to poor knowledge) and, 0.51 to 1 as (average to higher knowledge) of Comm Serve.

A total of 171(67.3%) participants exhibited good understanding about the genesis of community service programme by South African government.
The results showed that dentists were aware that one ought to complete community service programme to register as an independent practitioner with HPCSA 232(91.3%). In contrast, 219(86.2%) lacked the knowledge about legal imperatives of comm serve. Furthermore, the respondents’ knowledge about ethical principles were very discouraging as only 53(20.9%) correctly answered that justice is the ethical principle that best represents comm serve (Table 3).

**Summary:** Overall, majority of dentists displayed little to inadequate knowledge about the moral and ethical significance of compulsory community service program.

### Table 3: Participants’ knowledge about compulsory community service

<table>
<thead>
<tr>
<th>Knowledge level</th>
<th>Frequency of procedures (N, %)</th>
<th>Measure of Central Tendency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Knowledgeable</td>
<td>Not Knowledgeable</td>
</tr>
<tr>
<td>Variable((X)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. What necessitated S.A government to introduce comm serve?</td>
<td>171(67.3)</td>
<td>83(32.7)</td>
</tr>
<tr>
<td>2. Is completion of comm serve requirement to register with HPCSA?</td>
<td>22(8.7)</td>
<td>232(91.3)</td>
</tr>
<tr>
<td>3. What makes comm serve a legal requirement?</td>
<td>35(13.8)</td>
<td>219(86.2)</td>
</tr>
<tr>
<td>4. Which ethical principle best presence comm serve.</td>
<td>53(20.9)</td>
<td>201(79.1)</td>
</tr>
<tr>
<td>Overall score for Knowledge</td>
<td>58(22.8)</td>
<td>196(77.2)</td>
</tr>
</tbody>
</table>

#### 4.4 Procedures performed during compulsory community service

The results reveal that generally only exodontia 162(63.8%) is performed with greater regularity than all other procedures during community services. Less than a percent (0.8%) of the participants never undertake dental extractions during Comm Serve.
The following procedures were performed in varying degree by dentists during CommServe. For example periodontics (mostly scaling and polishing) is often performed by 31.5% of the dentists. Operative dentistry (largely simple restorations) is undertaken regularly by (27.2%); preventive dentistry and radiology by further (22.8%) and (17.4%) respectively. Procedures that are seldom or never performed include prosthodontics, endodontics and maxillofacial and oral surgery (Table 4).

Summary: Overall, during community service tenure, majority of participants were performed little or no specialist treatment on patients but dental extractions. The results shows that dentistry is clinically regressive.

Table 4: Frequency of procedures performed during compulsory community service

<table>
<thead>
<tr>
<th>Procedures performed</th>
<th>Frequency of procedures (N, %)</th>
<th>Measure of Central Tendency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regularly performed</td>
<td>Not often performed</td>
</tr>
<tr>
<td></td>
<td>Always (1)</td>
<td>Fairly often (2)</td>
</tr>
<tr>
<td>1. Exodontia</td>
<td>33(13)</td>
<td>129(50.8)</td>
</tr>
<tr>
<td>2. Periodontics</td>
<td>0(0.0)</td>
<td>80(31.5)</td>
</tr>
<tr>
<td>3. Operative Dentistry</td>
<td>16(6.3)</td>
<td>53(20.9)</td>
</tr>
<tr>
<td>4. Preventive Dentistry</td>
<td>8(3.1)</td>
<td>50(19.7)</td>
</tr>
<tr>
<td>5. Radiology</td>
<td>7(2.8)</td>
<td>37(14.6)</td>
</tr>
<tr>
<td>6. Maxillofacial &amp; Oral Surgery</td>
<td>3(1.2)</td>
<td>30(11.8)</td>
</tr>
<tr>
<td>7. Endodontics</td>
<td>1(0.4)</td>
<td>30(11.8)</td>
</tr>
<tr>
<td>8. Prosthodontics</td>
<td>6(2.4)</td>
<td>23(9.1)</td>
</tr>
<tr>
<td>9. Orthodontics</td>
<td>1(0.8)</td>
<td>1(0.4)</td>
</tr>
<tr>
<td>Overall Score for the Procedures</td>
<td>0</td>
<td>26(10.2)</td>
</tr>
</tbody>
</table>

4.5 Benefits of participants from compulsory community service.

Overall Majority of participants 219(86.2%) reported that they have gained a lot from participating in Comm Serve.
Majority of participants 168(66.1%) reported that they have developed soft skills such as compassion, empathy and great patients centred care. Communication and good rapport was also gained as confirmed by majority of participants 188(74%). Only minority of participants had 82(32.3) % had proficiency in clinical decision making (Table 5).

Summary: Overall, during community service tenure, majority 219 (86.2%) of dentists confirmed to have benefited from compulsory community service.

Table 5: Benefits dentists derived from participating in compulsory community service

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Frequency of Benefits (N, %)</th>
<th>Measure of Central Tendency</th>
</tr>
</thead>
<tbody>
<tr>
<td>What was the effect of comm serve on you general skills as a dentist?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable((X) Worst Least Good Most Mean Median Mode</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Performance of comprehensive assessments of patients?</td>
<td>30(11.8) 73(28.7) 127(50) 24(9.4)</td>
<td>2.57 3.00 3</td>
</tr>
<tr>
<td>2. Holistic treatment of patients?</td>
<td>48(18.9) 78(30.7) 96(37.8) 32(12.6)</td>
<td>2.44 3.00 3</td>
</tr>
<tr>
<td>3. Proficiency in Clinical decision- making?</td>
<td>15(5.9) 67(26.4) 141(55.5) 31(12.2)</td>
<td>2.74 3.00 3</td>
</tr>
<tr>
<td>4. Provision of compassionate, empathetic and patient-Centred care?</td>
<td>21(8.3) 65(25.6) 132(52) 36(14.2)</td>
<td>2.72 3.00 3</td>
</tr>
<tr>
<td>5. Effective participation in interdisciplinary teams?</td>
<td>55(21.7) 67(26.4) 90(35.4) 42(16.5)</td>
<td>2.47 3.00 3</td>
</tr>
<tr>
<td>6. Establishing Communication and Rapport with the patients?</td>
<td>17(6.7) 49(19.3) 158(62.2) 30(11.8)</td>
<td>2.79 3.00 3</td>
</tr>
<tr>
<td>7. Interdisciplinary and inter- professional referrals?</td>
<td>26(10.2) 61(24.0) 122(48) 45(17.7)</td>
<td>2.73 3.00 3</td>
</tr>
<tr>
<td>Overall Score for the Benefits</td>
<td>35(13.8) 219(86.2)</td>
<td>0.86 1.00 1</td>
</tr>
</tbody>
</table>

4.6 Perception of participants’ placement, administration support, finance and management.

Table 6 below, reflects the perception of participants’ placement, administration support, finance and management. Perception was assessed by giving a score of 1 to yes answer and 0 to No answer.

The scale measured perception from maximum of 4 and minimum of 1 for both. Scores (1 thru 2.0) were taken as Yes (1), (2.01 thru 4) as No (0).
Just under half 112(44.1%) didn’t get the places of their choices. Minority of participants 86(33.9%) were not satisfied with the placement especially those who were allocated to hospitals which were not among their first choices. In responds to the question of on how their allocation process was handled 109 (42.9%) of the participants felt that their allocation process was not fair.

The process felt to lack transparency as criteria used for allocating was not clear. The respondents were asked about work orientation when starting comm serve. Almost half of participants 123(48.4%) confirmed that they were not oriented before they started comm serve. The participants were asked about functioning of dental clinic facilities. Majority of participants 168(66.1) described the conditions of the clinics operating as poor (bad). Minority of participants 63(24%) confirmed that they were the only dentists at the clinic.

The participants were also asked about accommodation, more than quarter of participants 79(31.1%) were not provided with accommodation. Just over half 136(53.5%), reported that they were not happy with accommodation provided to them. Only handful of respondents 24(9.4%) did not receive their salary timeously. Just slightly below half 115(45.3%) participants did not have clinical supervision during their comm serve year.

The question of effectiveness of dental education was asked overwhelming majority of participants opined that dental education had prepared them for comm serve.

**Summary:** Overall, during community service year, just below 50% of participant had a positive experience.
Table 6: Participants’ perception about compulsory community service

<table>
<thead>
<tr>
<th>Perception</th>
<th>Frequency of perception N,%</th>
<th>Measure of central tendency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>1. Were you placed where you actually wanted to be placed?</td>
<td>142(55.9)</td>
<td>112(44.1)</td>
</tr>
<tr>
<td>2. Were you satisfied with your placement?</td>
<td>168(66.1)</td>
<td>86(33.9)</td>
</tr>
<tr>
<td>3. Was a process of placement fair?</td>
<td>145(57.1)</td>
<td>109(42.9)</td>
</tr>
<tr>
<td>4. Were you oriented before your programme started?</td>
<td>131(51.6)</td>
<td>123(48.4)</td>
</tr>
<tr>
<td>5. Were the facilities conducive to provide an effective service</td>
<td>86(33.9)</td>
<td>168(66.1)</td>
</tr>
<tr>
<td>6. Was the equipment adequate to enable you perform your duties</td>
<td>79(31.1)</td>
<td>175(68.9)</td>
</tr>
<tr>
<td>7. Were the only dentist?</td>
<td>63(24.8)</td>
<td>191(75.2)</td>
</tr>
<tr>
<td>8. Was the accommodation provided?</td>
<td>175(68.9)</td>
<td>79(31.1)</td>
</tr>
<tr>
<td>9. Were you happy with accommodation?</td>
<td>118(46.5)</td>
<td>136(53.5)</td>
</tr>
<tr>
<td>10 Did you receive salary timeously?</td>
<td>230(90.6)</td>
<td>24(9.4)</td>
</tr>
<tr>
<td>11 Was clinical supervision adequate?</td>
<td>139(54.7)</td>
<td>115(45.3)</td>
</tr>
<tr>
<td>12 Has dental education prepared you for comm serve?</td>
<td>215(84.6)</td>
<td>39(15.4)</td>
</tr>
<tr>
<td>Perception overall score</td>
<td>126(49.6)</td>
<td>128(50.4)</td>
</tr>
</tbody>
</table>

4.7 Concordance

Concordance in this context refers to an agreement/harmony between place of origin and place where community service was done. Majority of participants 144 (56.7%) were in concordance in this study (Fig 4).

Minority of participants 110(43.3%) were in dis-concordance. Dis-concordance in this context means disagreement or disharmony. These participants were not placed in the provinces of their origin.
There was no association between gender and concordance ($P=0.525$) (Table 4.7), this indicates that gender (male and female) does not determine your placement. Similarly, there was no association found with age ($p=0.23$), marital status ($p=0.58$) and having previous qualifications ($p=0.43$). However, association was found between race and concordance ($p=0.001$).

**Figure 4: Concordance**

### 4.7.1 Concordance and Socio Demographic profile

There was no association between gender and concordance ($P=0.525$) (Table 4.7), this indicates that gender (male and female) does not determine your placement. Similarly, there was no association found with age ($p=0.23$), marital status ($p=0.58$) and having previous qualifications ($p=0.43$). However, association was found between race and concordance ($p=0.001$).
Table 7: Concordance and Socio demographic profile

<table>
<thead>
<tr>
<th>Variables(X)</th>
<th>Concordances (c)</th>
<th>χ² (De Brun et al.)</th>
<th>P value</th>
<th>OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male:</td>
<td>62</td>
<td>43</td>
<td>0.40(1)</td>
<td>0.525</td>
</tr>
<tr>
<td>Female:</td>
<td>82</td>
<td>67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (years):</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤35</td>
<td>96</td>
<td>81</td>
<td>1.43(1)</td>
<td>0.231</td>
</tr>
<tr>
<td>≥35</td>
<td>48</td>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital status:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married:</td>
<td>33</td>
<td>22</td>
<td>0.31(1)</td>
<td>0.58</td>
</tr>
<tr>
<td>Single:</td>
<td>111</td>
<td>88</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black Africans:</td>
<td>123</td>
<td>75</td>
<td>10.8(1)</td>
<td>0.001</td>
</tr>
<tr>
<td>Non Black Africans</td>
<td>21</td>
<td>35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previous Qualifications</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qualifications:</td>
<td>66</td>
<td>45</td>
<td>0.62(1)</td>
<td>0.433</td>
</tr>
<tr>
<td>No Qualifications:</td>
<td>78</td>
<td>65</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.7.2 Concordance and experience of compulsory community service dentists.

There was no association between knowledge and concordance (P=0.74) (table 8).

Similarly, there was no association found with perception (P=0.54) and benefits and concordance (P=0.95).
Table 8: Concordance and experience of compulsory community service dentists.

<table>
<thead>
<tr>
<th>Variables (X)</th>
<th>Concordances (c)</th>
<th>χ²(De Brun et al.)</th>
<th>P value</th>
<th>OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledgeable:</td>
<td>34</td>
<td>24</td>
<td>0.11(1)</td>
<td>0.74</td>
</tr>
<tr>
<td>Not Knowledgeable:</td>
<td>110</td>
<td>86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perception:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes:</td>
<td>69</td>
<td>57</td>
<td>0.40(1)</td>
<td>0.54</td>
</tr>
<tr>
<td>No:</td>
<td>75</td>
<td>53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benefits:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good:</td>
<td>124</td>
<td>95</td>
<td>0.00(1)</td>
<td>0.95</td>
</tr>
<tr>
<td>Worst:</td>
<td>20</td>
<td>15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Summary: Overall, there is no relationship between concordance and (Knowledge, perception and benefits) of the community service dentists.

Summary of finding from in-depth interviews and focus group discussions.

Before the in-depth interview commenced, the aim of the study was explained once more, verbal consent had been obtained from each participant to continue, and privacy and confidentiality were ensured. All the participants were asked one initial open-ended question:

**What was most satisfying and dissatisfying aspects of work environment?**

Generally the participants had mixed views about level of satisfaction with their work environment. This is reflected in the following comments: “I was encouraged by witnessing happy patients after treating them.” The other participants said: “I was able to make my own clinical decisions.” On the contrary there were those who were not happy at all. This is what one dentist had to say: “There was lack of equipment, poor working conditions, lack of sanitation and hygiene.” The other participant was not happy about the operating space “Dental room was too small to accommodate dental staff at the same time.”
Before the focus group commenced, the aim of the study was explained: ‘This discussion should help us understand what your experience has been after participating in compulsory community service program.’ Verbal consent had been obtained from each participant to continue, and privacy and confidentiality were ensured. All the participants were asked one initial open-ended question:

In your opinion was compulsory community service beneficial. Elaborate why?

Overall they were mixed views. Participants reached consensus about declining of clinical skills since the procedure that was performed with greater regularity was only dental extraction. For example “Community service year meant extraction year due to lack of equipment, no budget allocated to dental clinic and lack of support from management.” Community service dentists expressed sense of empathy towards the communities. “I was happy to have been placed at the community where they never had oral health services before.” This comment shows the sense of civic responsibility and willingness to serve. The other participants had this to say: “Comm serve helped me to reach out disadvantaged people with very limited resources.”
CHAPTER 5: DISCUSSION

Chapter 5 provides the discussion for the study.

5.1 Validity and Bias

Validity (error) is a function of the sample size. If sample size is less than eighty percent (80%) you worry about the representativeness of the results. The proposed sample size as calculated is 196, anticipating non-response of about 20% we raised the sample size for this study to 235 participants at the confidence interval of 95%. The sample size that was obtained was 254 the researcher managed to exceed the estimated sample size. Therefore based on the sample size it can be concluded that error was minimised.

To further minimise bias, the questionnaire was derived from validated similar studies about Comm Serve programme. Therefore it can be concluded that bias was effectively minimised in this study

5.2 Demographic profile

The average age of the participants was 32.97, SD (5.184) this is higher when compared to the studies conducted on nursing graduates and a similar study conducted on dentists in 2004. The average age of the nursing graduates was between ages 21 to 27 years (Govender et al., 2015), whilst the study by on dentists had an average age of 24.8 (Naidoo, 2007). The average in this study was higher due to 30% of the participants being over the age of 35, with the oldest participant being 50 years of age when they completed their undergraduate degree.
Females constituted majority of the participants 149 (58.7%). This was similar to a study conducted by (Govender et al., 2015) for nurses who also had higher numbers of female (76.6%; n=82). Conversely a study conducted by (Nemutandani et al., 2006) reported the gender distribution to be skewed to males (52.9%) than females 48.1%. The study reflects that the may be an increased intake of female students over the years.

Majority of the participants were black African 198(78%), with the remaining 56(22%) constituting non-black Africans (Indians, Whites and Coloureds). The results of the study represent the true demographics of the South African population.

Most of dentists were unmarried 199 (78.3%) and did not have children 179 (70.5%) at the time of compulsory community service.

Most of the participants did not have previous qualifications 143(56.3%), and worked in the public sector 159(62.6%), and there were 2(0.8%) unemployed dentists. The question can be asked ‘is compulsory community service still relevant today? This is a sham for a so called “scarce skills” profession. This raises more questions about the continuous existence of the programme (policy).

In addition about 155(61.0%) of dentists received their degrees from Sefako Makgatho Health Sciences University/Medunsa. Medunsa/SMU has history of training majority of previously disadvantaged students who happen to be black Africans. Majority 203(83%) of participants in the study performed comm serve after 2006, and that is reflected of the progressive increased intake of dentistry students over the years.
The participants were from all nine provinces, with majority of participants 90 (35.4%) in the study having completed their comm serve in the Limpopo province which is one of the highly rural provinces. According to the Department of Health: “the main objective of Community service is to ensure improved provision of health services to all the citizens of our country. In the process, this also provides our young professionals with an opportunity to develop skills, acquire knowledge, behaviour patterns and critical thinking that will help them in their professional development.”

5.3 Knowledge of participants regarding compulsory community service

A total of 171(67.3%) participants exhibited a good understanding about the genesis of the community service program (Csp) by the South African government. The results showed that dentists were aware that one should complete Csp to register as an independent practitioner with HPCSA 232(91.3%). In contrast, 219(86.2%) lacked the knowledge about legal imperatives of compulsory community service. Furthermore, the respondents’ knowledge about ethical principles were very discouraging as only 53(20.9%) correctly answered that justice is the ethical principle that best represents compulsory community service.

Overall the dentists displayed poor knowledge about the programme. The results found in this study are similar to those assessing whether internship training adequately prepared South African medical graduates for community service (Nkabinda et al., 2013). The study also found that there were critical gaps in knowledge and skills in paediatrics, orthopaedics, anaesthetics and obstetrics.
5.4 Perception of participants regarding compulsory community service

Just under half 112 (44.1%) of the participants were not placed where they had chosen to complete their community service. Minority of those participants 86(33.9%) were not satisfied with their placement, especially those who were allocated to hospitals which were not among their first choices. That is contrary to a study conducted on newly qualified nurses performing compulsory community service in Kwa-Zulu Natal (Govender et al., 2015). The participants in that study were satisfied with placement since majority of the participants were allocated to their first choice of health institution.

In responds to the question on how their allocation process was handled 109 (42.9%) of the participants felt that their allocation process was not fair. This response was similar to a study by that concluded that the allocation process was widely criticised by the first cohort of health professionals who had undertaken community service. They stated that the process took place too late and during their final exams. They also indicated that the process lacked transparency, as the criteria used for the allocation process not clear (Reid, 2002).

The respondents were asked whether they were orientated in the work place before commenced with comm serve. Almost half of the participants 123(48.4%) confirmed that they were not oriented before they started comm serve. In the study by (Govender et al., 2015) the results confirmed that only small number of participants received ongoing orientation.
Orientation programmes are helpful with regards to helping newly-qualified graduates to transition into their professional role and can decrease reality shock when dentists commence working (Govender et al., 2015). Lack of sufficient orientation was also highlighted as one of the contributory factors for a lack of confidence affecting newly-qualified nurses (Thopola et al., 2013). Furthermore, orientation is important for positive socialisation into a profession (Govender et al., 2015, Thopola et al., 2013).

The participants were asked about functioning of dental clinic facilities. Majority of participants 168(66.1%) described the conditions of the clinics operating as poor (bad). In the study by (Reid, 2002) dentists lamented lack of equipment and material as the major setback enabling them from providing high quality service. Many Community service dentists felt that the service to their patients was severely limited due to lack of equipment. Minority of participants 63(24%) confirmed that they were the only dentists at the clinic. Similarly a study on newly qualified nurses at the University of Limpopo – Turfloop graduates’ professional development was challenged by staff shortages and a lack of resources (Thopola et al., 2013). This finding confirms the findings in the study that shortage of human resource as well as equipment compromises the service they provide to patients. The negative experiences of the participants can be related to (Dyess and Sherman, 2009) study where nurses reported numerous instances of feeling utterly alone, influencing feelings of professional isolation.
The participants were also asked about accommodation, more than a quarter of participants 79(31.1%) were not provided with accommodation. The study by (Reid, 2002) stated that unavailability of accommodation particularly in rural areas was a major problem. Other studies showed that accommodation facilities for community service doctors, dentists and pharmacists have been inadequate and unsafe (Naidoo and Chikte, 2002; Reid, 2000).

A slight majority 136(53.5%) of the participants in the study reported that they were not happy with the accommodation provided to them. This study findings were contrary to a study conducted on community service doctors in Limpopo who had more than 70% indicating that they were satisfied with their accommodation, and only handful of respondents 24(9.4%) did not receive their salary timeously (Nemutandani et al., 2006)

Just slightly below half 115(45.3%) participants did not have clinical supervision during their comm serve year. Study by (Reid, 2002) also confirmed poor supervision. Study by (Steyn, 2012), reported a number of challenges, and only 9% of CSDs reported that they had experienced no challenges during their community service year.

The challenges included limited resources (25%), lack of supervision and support (14%), staff shortages (10%) and lack of referrals (8%). fifteen years later the status quo remains. The question of effectiveness of dental education was asked and an overwhelming majority of participants opined that dental education had prepared them for comm serve.
In the study by (Govender et al., 2015) all of the participants felt sufficiently prepared for the role and in their ability to offer care with confidence (Visser et al., 2006) examined the experiences and attitudes of dieticians carrying out comm serve whilst (Parker et al., 2013) found that even though dieticians were well prepared for comm serve, aspects of their educational preparation required revision in order to ensure their readiness to serve the communities in which they were placed.

5.5 Benefit of participants regarding compulsory community service

Benefit is an advantage or profit gained from something. Participants were asked what role compulsory community service had on their general skills as dentists. Majority of participants 219(86.2%) reported that they have gained a lot of experience from participating in compulsory community service. A national cross-sectional study conducted to determine the level of satisfaction levels of doctors and dentists who performed community service reported that community service officers were highly satisfied with community service programme. They also exhibited professional development. The study by (Reid, 2002), reported that many community service dentists were resentful that they were losing their skills through lack of use during their first year of practice. Satisfaction was rated highly by doctors and dentists in (Hatcher et al., 2014). Experiencing satisfaction during Comm Serve could improve the retention of dentists, which is one of DoH’s objectives (Hatcher et al., 2014).

Majority of participants 168(66.1%) reported that they developed soft skills such as compassion, empathy and great patients centred care.
Communication is one of the core competencies for undergraduate dentistry. It is encouraging to report that Communication and good rapport were also gained as confirmed by majority of participants 188(74%).

Slightly below half of participants 126(49.6%) were dissatisfied with holistic approach to treatment, due to lack of equipment and instruments and that led to minority of participants 82(32.1%) reporting that their proficiency in decision making was compromised. Minority of participants reported that interdisciplinary team work and participation in inter-professional referrals, were at its lowest. 122(48.0%) and 87(34.2%) respectively.

5.6 Procedure performed score

The results indicated that generally only exodontia 162(63.8%) was performed with greater regularity than all other procedures during community services for dentists. Study by (Reid, 2002) concurs with this. Furthermore the study participants felt that their skills were not being utilized appropriately, as they were largely performing extractions only. A study conducted in Gauteng also confirmed that the majority of dentists who had completed their Comm Serve in 2003 had also done mainly extractions (Holtshousen, 2004). Sixteen years on nothing has changed. Most of the procedures in dentistry are highly specialized but are taught at undergraduate level and Comm Serve dentists are expected to perform them.

The least performed procedures were Maxillofacial & oral surgery 221(87%), Radiology 210 (82.7%), Preventive 196(77.2%) and Operative dentistry 185(72.8%).
performance of mainly extraction indicates that the primary healthcare basic package recommended by DoH for dentistry has not been implemented.

In the study by (Reid, 2002) majority 63% of the participants felt that they were making a difference, especially in areas where dental services were previously non-existence. Some dentists started their own programmes such as: Brushing and school oral health promotion. The procedure that were almost never performed were Orthodontics 251 (98.9%), Prosthodontics, 225(88.5%) and Endodontics 223(87.8%) during community service. This is the bulk of the work that is done in private practice, especially Prosthodontics and Endodontics. Overall majority of the procedures were not often performed.

The data shows that Comm Serve for dentists is clinically regressive. Dentists are not performing procedures that they were trained to do. The very essence of clinical education and training is to keep your clinical skills up. Dentistry is hands-on profession. Lamarck’s first law on use and disuse states that “… the permanent disuse of any organ imperceptibly weakens and deteriorates it, and progressively diminishes its functional capacity, until it finally disappears.” Essentially we cannot justify why dentists should do Comm Serve except that the country (SA) makes financial resources available for this one year project. Psychomotor skills is demonstrated by physical skills such as movement, coordination, manipulation, dexterity, strength, speed- actions which demonstrate the fine motor skills, such as use of precision instrument or tools.
After Comm Serve year it’s gradually becoming difficult to secure employment if you were not state bursary holder. Some provinces like Gauteng and Limpopo have withdrawn sponsoring the profession.

5.7 Concordance

Concordance in this context refers to an agreement/harmony between place of origin and place where community service was done. Majority of participants 144 (56.7%) were in concordance in this study.

Minority of participants 110 (43.3%) were in dis-concordance. Dis-concordance in this context means disagreement or disharmony. These participants were not placed in the provinces of their origin.

5.7.1 Socio-demographic profile vs Concordance

There was no association between gender and concordance (P=0.525). This indicates that gender (male and female) does not determine your placement. Similarly, there was no association found with age (P=0.23), marital status (P=0.58) and having previous qualifications (P=0.43). However, association was found between race and concordance (P=0.001).

Studies conducted have generally reported that the placement during community service was not fair and transparent (Govender et al., 2015; Nemutandani et al., 2006; Reid, 2002). However, the study shows that the only factor that was significant was race. Therefore, this could indicate that overtime the allocation process has been improved. The significance found with regard to race needs to be explored further.
5.7.2 Concordance vs Knowledge

There was no association between knowledge and concordance (P=0.74) this indicates that knowledge (knowledgeable or less knowledgeable) does not improve or decline when you are placed at your birth place. Similarly, there was no association found with perception (P=0.54), However, association was found between Benefits and concordance (0.024).

5.7.3 Concordance vs Perception

The study found that there was no association between concordance and perception (P=0.54), this means participants’ views were not influenced by where they were placed. Bhayat, 2006, found that the provincial choice was directly related to their provincial place of residence. Almost all of the students chose their place of residence as their preferred choice for completing their comm serve.

5.7.4 Concordance vs Benefits

Our study found that there wasn’t an association between benefits and concordance (P=0.95). This means where people were placed and where they came from/place of birth couldn’t influence how satisfied or dissatisfied they were about the Comm Serve.
CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 Delimitation and Limitation

6.1.1 Delimitation

“The delimitation are those characteristics that limit the scope and define the boundaries of your study.” (Simon and Goes, 2013). The scope of the study was limited by the following participants’ characteristics

(i) Participants must have completed their studies in one of the South African Universities.

(ii) Have undergone Compulsory community service in South Africa.

6.1.2 Limitation

“Limitations are potential weaknesses and are out of the control of the researcher.” (Simon and Goes, 2013).

Potential weaknesses to the study is when participants are not the best group of people to access and also when participants do not acknowledge what the researcher is trying to obtain (sample size and selection).

The aim of the study was to explore the experiences (understanding, attitudes and perceptions, benefits and challenges) of South African dentists following Comm Serve. The study concluded that dentists’ knowledge about Comm Serve was poor.
The objective of DoH to develop skills and competence of community service dentists is regressing. The Comm Serve is gradually becoming irrelevant and violates Public Finance Management Acts (PFMA) rules.

Majority of participants lamented about loss of skills as a big problem. Until such time oral health is recognized as an integral part of general health (not lip service) the more communities in SA will benefit from this program. The results also showed that placing people in the place of birth is very beneficial. The stakeholder involved should have project management background. Attention should be paid to the concerns raised by the participants.

6.2 Recommendations

The following recommendations emanate from the results:

1. First year dental students must be educated about Comm Serve when they apply and/or register or during their orientation week.

2. Governments should clearly articulate their expectation from Comm Serve personnel.

3. The government should guarantee employment after completion of Comm Serve by dentists.

4. A complete job description and handover file should be prepared and be available at each hospital/health service for new Comm Serve dentists. This file should include details on administrative procedures, treatment options and schedules for dealing with routine dental-related disorders.

5. More studies should be conducted to investigate further the relationship between socio demographic data and concordance.
REFERENCES


Holtshousen, W. 2004. Service rendering statistics of compulsory community service dentists in Gauteng. MEDUNSA.


Steyn, N. 2012. Community service dieticians delivering an effective nutrition service: what are the policy options?


COVERING LETTER

Dear participants

Experiences of South African dentists towards Compulsory Community Service (CCS)

I, Dr Lesley M Machete, a Masters of Dental Science (MDS) student in Community Dentistry Department, School of Oral Health Sciences at Sefako Makgatho Health Sciences University (SMU), hereby request you to be one of the participants in the study.

This study is undertaken to get perspectives of dentists about Compulsory community service programme in South Africa.

Kindly note that you are at liberty to choose not to participate in the study. However, your willingness to participate in the study will be highly appreciated.

All information provided by you will be strictly confidential and will only be used for research purposes. Your name will not be linked to any of your answers. For the purpose of the dissertation, no pertinent personal details will be used. You will only be referred to by a pseudonym in order to protect your identity.

If you have any questions or concerns about your rights as a study participant, or any aspect of this study, you may contact the Research Principal Investigator.

Contact details: Dr Lesley M Machete

Tel: 012 521 4860/4848  Cell: 083 513 0495

Email: lesley.machete@smu.ac.za or machetelesley@yahoo.com
APPENDIX B: QUESTIONNAIRE

PLEASE COMPLETE THE QUESTIONNAIRE BY MAKING A CROSS IN THE BLOCK THAT IS HIGHLIGHTED

APPENDIX B

SECTION A. SOCIO-DEMOGRAPHIC INFORMATION

PLEASE MARK APPROPRIATE BOX WITH AN X

1. Age (years)

2. Gender  Male  Female

3. Place of origin (place and province)

4. From which institution did you qualify as a Dentist?
   - University of Pretoria
   - Witwatersrand University
   - University of Western Cape
   - University of Limpopo (Medunsa Campus)
   - University of Sefako Makgatho Health Sciences

5. Year of qualification

6. What was your marital status at the time of qualification?
   - Married
   - Single
   - Divorced

7. Number of Children at the time of qualification:

8. What is your race?
   - Black
   - Coloured
   - Indian
   - White
   - Other

9. Where did you do your Community Service? (Place, province)

   Current status

10. Did you have any previous qualification at the time of training as a dental student?
    - Diploma
    - Bachelor's degree
    - Masters
    - Doctorate
    - Not Applicable

11. Current Employment sector
    - Public sector
    - Academic institution
    - Private practice
    - Unemployed
SECTION B: KNOWLEDGE ABOUT COMPULSORY COMMUNITY SERVICE.

12. What necessitated S.A government to introduce Community Service? (Please select one answer)
   - Equity and access [ ] improve the skills of dentists. [ ]
     Develop dentists. [ ] Promote fundamental human right [ ] Distribution of staff [ ]

13. Does completion of Community Service fulfil the registration with Health Professions Council of South Africa (HPCSA)?
   - No [ ] Yes [ ]

14. What makes Compulsory Community Service a legal requirement? (Please select one answer)
   - HPCSA policy [ ] Constitution [ ] Occupational Safety Health Act [ ] Other [ ]

15. Which ethical principle is best represents Compulsory community service? (Please select one answer)
   - Autonomy [ ] Beneficence [ ] Non-Maleficence [ ] Justice [ ]

SECTION C: PERCEPTION ABOUT COMPULSORY COMMUNITY SERVICE (CCS)

16. Has dental education prepared you for Compulsory community service? (Please select one answer)
   - Definitely [ ] Maybe [ ] Maybe not [ ] Definitely not [ ]

17. To what extent did you perform the following procedures during Community Service?
   Please Use Scale (1-4): 1=Always 2=Fairly often 3=Sometimes 4=Never

17.1 (Health Promotion programmes)
17.1. a. School based [ ] b. Fissure sealants [ ] c. Brushing [ ] d. Fluoridation [ ]
17.2. a. Composite [ ] b. Fissure sealants [ ] c. Amalgam [ ] d. Preventive Resin Restoration (PRR) [ ]
17.3. a. Extraction [ ] b. Dry socket [ ] c. Suturing [ ] d. Splinting [ ]
17.4. a. Withdraw Blood [ ] b. Biopsy [ ] c. Inter-maxillary fixation (IMF) [ ]
   d. Remove impactions [ ]
17.5. a. Cephal tracing  b. Model trimming  c. Appliances  d. Wire bending
17.6. a. 3 Unit Bridge  b. Partial dentures  c. Veneers  d. Complete dentures
17.9.a. Taking Occlusal  b. Intraoral X-rays  c. Pan & Cephal  d. Interpret X-rays

18. What was the effect of Compulsory Community Service on general skills as a dentist?

Please use the scale of (1-4): 1=Worst 2= Most 3= Least 4. =Good

   a. Perform comprehensive assessments of patients
   b. Holistic treatment of patients.
   c. Proficiency in clinical decision-making
   d. Provision of compassionate, empathetic and patient-centred care.
   e. Participation in interdisciplinary patient management teams.
   f. Communication/ Rapport with the patients.
   g. Effective patient referrals.

19. Perception of dentists' placements

Please Use Scale (1-4): 1= Empathic yes 2=Yes, 3=No, 4=Emphatic No 5= Not Applicable

   a. Were you placed where you actually wanted to be placed?
   b. Were you satisfied with your placement?
   c. Was a process of placement fair?
   d. Were you orientated before the programme started at work place?
   e. Were the facilities conducive to provide an efficient service?
   f. Was the equipment adequate to enable you to perform your duties?
   g. Were you the only dentist there?
h. Was the accommodation provided?  

i. Were you happy with accommodation?  

j. Did you receive your salary timeously?  

k. Was clinical supervision adequate?  

SECTION D: PRACTICAL SATISFACTION ATTITUDE TOWARDS COMPULSORY COMMUNITY SERVICE (CCS).

Q1: Most satisfying aspects of work environment.
   •  
   •  

Q2: Least satisfying aspects of work environment.
   •  
   •  

Q3: What were you hoping to achieve by participating in a CCS programme?
   •  
   •  

Q4: What do you think are the benefits of doing CCS?
   •  
   •  

Q5: Did community service meet your expectations?
   •  
   •  

Q6: Did Community service provide opportunities for professional development?
   •  
   •  

Q7: In your opinion was CCS beneficial. Elaborate why?
   •  

Q8: In your opinion was CCS non-beneficial. Elaborate why?
   •  
   •  

Q9: Please describe what this CCS year has meant to you.
   •  
   •  

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Q10: Do you see your role as a dentist expanded through the CCS experience?
   - 
   - 

Q11: What do you think should be the main objective/s of CCS for the dentists?
   - 

Q12: Was there a referral centre and protocol for referrals to the specialists?
   - 
   - 

Thank you for completing the questionnaire
APPENDIX C: CONSENT FORM

SEFAKO MAKGATHO HEALTH SCIENCES UNIVERSITY ENGLISH CONSENT FORM

Statement concerning participation in a Research study:

Name of a Study:

*Experiences of South African dentists towards Compulsory community service (Comm Serve)*

I have read the information on the aims and objectives of the proposed study and was provided the opportunity to ask questions and given adequate time to rethink this issue. The aim and objectives of the study are sufficiently clear to me. I have not been pressurized to participate in any way.

I understand that participation in this study is completely voluntary and I may withdraw from it at any time and without supplying reasons.

I know that this study has been approved by the Sefako Makgatho University Research Ethics Committee (SMUREC), Sefako Makgatho Health Sciences University. I am fully aware that the results of this study will be used for scientific purposes and may be published. I agree to this, provided my privacy is guaranteed.

I hereby give consent to participate in this study.

............................................... ............................................... 
Name of participant Signature of participant

............................................... ............................................... 
Place Date Witness

Statement by the Researcher

I provided verbal and written information regarding this study. I agree to answer any future questions concerning the study as best as I am able. I will adhere to the approved protocol.

............................................... ............................................... ............................................... 
Name of Researcher Signature Date Place
APPENDIX D: SMUREC ETHICAL APPROVAL

Sefako Makgatho Health Sciences University
Research & Postgraduate Studies Directorate
Sefako Makgatho University Research Ethics Committee
(SMUREC)
Molotlepi Street, Ga-Rankuwa 0208
Tel: (012) 521 5617/3698 | fax: (012) 521 3749
Email: lorato.phiri@smu.ac.za
P.O. Box 163 Medunsa 0204

APPROVAL NOTICE - NEW APPLICATION

04 August 2016

Dr ML Machete
Department of Community Dentistry
P.O Box D21
Medunsa, 0204

MEETING: 06/2016

SMUREC Ethics Reference Number: SMUREC/D/185/2016: PG

The New Application received on 28 June 2016, was reviewed by members of Sefako Makgatho University Research Ethics Committee 04 August 2016 and was approved on 04 August 2016.

Title: Experiences of South African dentists towards compulsory community service

Researcher: Dr ML Machete
Supervisor: Dr DP Mlotjwa
Co-supervisor: Dr A Khan
Department: Community Dentistry
School: Oral Health Sciences
Degree: Masters of Dental Science (MDS)

Please note the following information about your approved research protocol:

Protocol Approval Period: 04 August 2016 – 04 August 2017

Please remember to use your protocol number (SMUREC/D/185/2916: PG) on any documents or correspondence with the REC concerning your research protocol.

Please note that the REC has the prerogative and authority to ask further questions, seek additional information, require further modification, or monitor the conduct of your research and the consent process.

After Ethical Review: Please note a template of the progress report is obtainable in the Research Office and should be submitted to the Committee before the year has expired. The Committee will then consider the continuation of the project for a further year (if necessary). Annually a number of projects may be selected randomly for an external audit. Translation of the consent document in the language applicable to the study participants should be submitted.

International Organisation (IERG00030091), Institutional Review Board (IRB000010386) Expiry date: 09 December 2018, Federal Wide Assurance (FWA000023943) Expiry date: 31 August 2017 and NHREC No: REC 210408-003

Sincerely

DR C BAKER
DEPUTY CHAIRPERSON SMUREC