Perceptions of newly-qualified oral healthcare professionals about their exposure to service learning in their final year of training at the Sefako Makgatho Health Sciences University, South Africa

By

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ABSTRACT

The main purpose of this study was to investigate the perceptions of oral health professionals from Sefako Makgatho Health Sciences University (SMU) regarding the impact of an undergraduate Service Learning (SL) module on their current practice. A case study design was used to investigate the perceptions of newly-qualified oral healthcare professionals about their exposure to service learning in their final year of training. The participants' socio-demographic variables were also explored to provide insight into factors that may impact on long-term application of SL principles, for example, age denoting maturity of the individual and previous exposure to SL that may yield future interest in community service.

Semi-structured interviews were conducted in English, for a duration of 7-30 minutes for each participant. The researcher-administered interview guide comprising five items, with both close-ended and open-ended questions was used to interview participants. A total of 22 study participants from the Bachelor of Dental Therapy, Bachelor of Dental Surgery and Bachelor of Oral Health participated in the study. The key research question was, "What are the perceptions of oral health professionals regarding the impact of SL on their practice?"

The participants indicated that SL is a worthy activity that exposed the students to the real world of dentistry, and provides them with the exposure that prepares them for work actualities, which the traditional didactic methods of teaching and learning could not cover. Moreover, the study also highlighted that SL had benefited the participants in their compassion for clients, as well as making them socially reflective and accountable to communities while maintaining quality patient care. Respondents suggested that SL fostered their communication skills, improved their confidence, self-awareness and improved their abilities to make independent professional decisions. Despite the benefits that SL offers, the study participants also revealed some challenges of the SL programme at SMU. The concerns raised included the short duration of the SL programme, the limited coverage of communities by SL and limited opportunity to experience SL, as it is only offered to the final year students. Participants made several recommendations for improving the SL programme. These recommendations include the upgrade of the SL program and the incorporation of feasible and sensible aspects that were lacking in the programme. The study proposes further investigations on SL approaches in different environments.

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OPSOMMING

Die hoofdoel van hierdie studie was om die persepsies van professionele persone in mondgesondheid van die Sefako Makgatho Health Sciences University (SMU) te ondersoek rakende die impak van 'n module voorgraadse diensleer (SL) op hul huidige praktyk. ’n Gevallestudie-ontwerp is gebruik om die persepsies van nuut-gekwalifiseerde mondgesondheidsorgpersoneel oor hul blootstelling aan diensleer in hul laaste jaar van opleiding te ondersoek. Die sosio-demografiese veranderlikes van die deelnemers is ook ondersoek om insig te gee rakende faktore wat op die langtermyn op die toepassing van diensleerbeginsels mag impakteer, byvoorbeeld, ouderdom wat volwassenheid van die individu aandui en vorige blootstelling aan SL wat toekomstige belangstelling in gemeenskapsdiens kan aanwakker.

Semi-gestruktureerde onderhoude was in Engels gevoer vir 'n duur van 7-30 minute vir elke deelnemer. ’n Navorsergeadministreerde-onderhoudsgids wat uit vyf items bestaan het, insluitend oop-einde en geslote-einde vrae, is gebruik om die vrae te rig. ’n Totaal van 22 deelnemers afkomstig van die Baccalaureus in Tandterapie, Baccalaureus in Tandheelkundige Chirurgie en Baccalaureus in Mondhigiëne Oral Health het uiteindelik aan die studie deelgeneem. Die belangrikste navorsingsvraag was: "Wat is die persepsie van mondgesondheidswerkers rakende die impak van SL op hul praktyk?"

Die deelnemers het aangedui dat SL ’n waardige aktiwiteit is wat die studente aan die werklike wêreld van Tandheelkunde blootgestel het wat tradisionele didaktiese metodes van onderrig en leer nie kon vermag nie. Verder het die studie ook benadruk dat SL die deelnemers se deernis vir kliënte verbeter het, asook dat hulle sosiaal-reflektief en verantwoordbaar teenoor gemeenskappe gemaak is terwyl die pasiëntversorging van gehalte behou is. Respondente het voorgestel dat SL hulle kommunikasievaardighede bevorder het, asook hulle selfvertroue, selfbewustheid en vermoë om onafhanklike professionele besluite te neem verbeter het.

Ondanks die voordele wat SL bied, het die deelnemers aan die studie ook ’n paar uitdagings rakende die SL-program van SMU geopenbaar. Die bekommernisse wat geopper was, is die kort duur van die SL-program, die beperkte dekking wat SL bied aan gemeenskappe, en die beperkte geleentheid om SL te ervaar aangesien dit slegs vir finalejaar studente aangebied word.

Deelnemers het verskeie aanbevelings gemaak om die SL-program te verbeter. Hierdie aanbevelings het ingesluit om die SL-program op te gradeer en om ook haalbare en sinvolle aspekte in te sluit wat te kort geskiet het in die program. Die studie het ook verdere navorsing oor SL-benaderings in verskillende omgewings voorgestel.

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DECLARATION

I, Motlalepula Grace Phalwane (neé Seletswane), hereby declare that the work contained in this mini dissertation is my own, and all the sources that I have used or quoted have been indicated and acknowledged by means of complete referencing. This work has not been submitted, in part or in its entirety to any other University for obtaining any qualification.

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SIGNATURE **DATE**

(Mrs M.G. Phalwane)

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DEDICATION

I dedicate this work to my husband, Johannes Petrus Phalwane, our son, Rorisang Phalwane and our daughter, Realeboga Phalwane.

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LIST OF ACRONYMS

B Dent Ther	Bachelor of Dental Therapy
BDS	Bachelor of Dental Sciences
BOH	Bachelor of Oral Hygiene
BChD	Bachelor of Dental Surgery
CBE	Community-based education
HEI	Higher Education Institution
HPCSA	Health Professional Council of South Africa
HPE	Health Professions Education
ICD	Integrated Clinical dentistry
ID	Identity Document
LLL	Look, Listen and Learn
MFOS	Maxillo-Facial and Oral Surgery
PMQ	Post-Matric Qualification
POHF	Public Oral Health Facilities
RSA	Republic of South Africa
SES	Socio-Economic Status
SL	Service Learning
SMU	Sefako Makgatho Health Sciences University
SOHS	School of Oral Health Sciences
THEnet	Training for Health Equity Network
UL	University of Limpopo
WIL	Work-Integrated Learning

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CHAPTER 1: PREAMBLE

1.1. INTRODUCTION

There is an urgent need to improve access to oral health care for underserved communities in developing countries such as India. The same call applies to South Africa (Molete, Yengopal, & Moorman, 2014). As provision of access to Oral Health care services improves, these communitites also need appropriately trained oral health professionals to provide that access. Oral Health professional training has been said to be excellent if teaching and learning approaches such as service learning (SL) are utilised (Anand, Pratap, Padma, Kalyan, Vineela, & Varma, 2017).

Service Learning (SL) in health professions education (HPE) has been found to influence oral health students' perceptions towards community service. This is mainly so because SL as a reflective pedagogy is a form of experiential learning (Fenwick, 2001). Students from Higher Education Institutions (HEIs) undertake organized service activities to meet the needs of the community. These activities are formally assessed within the learning programme. Oral Health professionals should be able to respond to these community needs, given their SL exposure during oral health training (Radford, Holmes, Dunne, & Woolford, 2015). As a result of the exposure to SL, the training of Oral Health professionals plays a pivotal role in shaping the perceptions of learners regarding future practice in the community (Anand et al., 2017).

In South Africa, perceptions of oral health professionals regarding providing services to underserved communities are generally not positive, as there are impressions of lower level provision of the services against the oral health needs of patients (Van Wyk & van Wyk, 2004). Therefore, SL pedagogy may be a possible solution to address these negative perceptions, hopefully leading to desired outcomes of meeting national oral health needs. Oral health needs of the community are met when the students develop social responsibility and accountability during their undergraduate SL training (Phalwane, Postma, & Ayo-Yusuf, 2016). The lack of developing social responsibility and accountability may lead to poor access and increased disparities in community oral health care, especially, in underserved and rural communities (Anand et al., 2017).

1.2. BACKGROUND

Since the introduction of SL to oral health students at Sefako Makgatho Health Sciences University (SMU) in 2011 [at the time when SMU was a health campus of the University of Limpopo], oral health graduates' perceptions of their experiences during SL have not been evaluated. Even though

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SL is implemented in the teaching and learning of Oral Health students, there are limited studies done regarding the evaluation of its impact/influence on the graduates in their respective practice environments; hence, the need to determine how newly-qualified oral health professionals perceive their exposure to SL. This proposed study deals with the application of SL by qualified practitioners.

The SL module at SMU, School of Oral Health Sciences was introduced to the final year Oral Health students belonging to the three oral health programmes which are: Bachelor of Dental Sciences (BDS), Bachelor of Dental Therapy (B Dent Ther) and Bachelor of Oral Hygiene (BOH). The SL context will be fully described under paragraph 2.3.3.

1.3. PROBLEM STATEMENT

Most studies (Gardner & Emory, 2018; Leytham, Dawson, & Rasmussen, 2018; Thanveer, Ajith Krishnan, Bafna Harshal, Pal & Pulkit, 2013, and Bhayat, Vergotine, Yengopal, & Rudolph, 2011) conducted both locally and internationally evaluate perceptions of students towards SL. However, there are few studies (Fullerton, Reitenauer & Kerrigan, 2015) that followed-up on these students after graduation as professionals in practice. The impact of SL in the long-term has not yet been evaluated in the local context. Therefore, there is a lack of follow-up literature on studies evaluating the perceptions of oral health professionals (after qualification) regarding how they applied the knowledge and skills acquired during oral health academic training. Previous South African studies have highlighted the need to further investigate the usefulness of SL in oral health practice (Kroon, Prince, & Denicker, 2001; Bhayat, Vergotine, Yengopal, & Rudolph, 2011). Also observable in the literature surveyed for this study, there seems to be a dearth of scholarship on stakeholder/students involvement in curricular design within the Oral Health discipline. This runs directly against critical pedagogy/andragogy as advocated by Freire (1970) in his seminal work entitled *Pedagogy of the oppressed*. That is to say the current state of affairs in Oral Health curriculum is devoid of the opinion/voice of the recipient (student). This situation is applicable to the SMU context, including this cohort of graduates.

1.4. RESEARCH QUESTIONS

The research questions addressed in the study are as follows:

- What are the perceptions of oral health professionals regarding the impact of SL on their practice?

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- In what ways, have SMU oral healthcare graduates developed social responsiveness and personal growth by being exposed to SL during their undergraduate training?
- How did SL experiences of undergraduate students influence learning of theoretical content?
- What challenges do oral health practitioners encounter in providing acceptable healthcare services?

1.5. AIM AND OBJECTIVES

1.5.1. Aim of the Study

The primary aim of this study was to explore the perceptions of oral health professionals regarding the impact of SL on their current practice.

1.5.2. Objectives of the Study

The study objectives are four-fold, and are presented as follows:

- to determine the self-reported experiential practices of oral healthcare professionals that require the application of knowledge and skills acquired during SL training;
- to evaluate the level of social responsiveness and personal growth among SMU oral healthcare graduates;
- to determine the perceptions of oral health practitioners about SL enhancing their academic development during undergraduate training, and
- to understand any challenges encountered by the practitioners in providing acceptable (i.e. adequate) healthcare services in the field of oral health practice.

1.6. SIGNIFICANCE OF THE STUDY

The findings of this study are likely to make a contribution to the SL policy at the SMU, with regard to the understanding of SL in the context of oral health practice. This study is important because SMU as a recently established university is currently in the process of reviewing its curricula, in which, according to the literature (Furco & Norvell, 2019; Walker & Walker, 2018 and Andreoletti & Howard, 2018), the inclusion of SL should be beneficial to student learning, specifically, when they practice their profession in the community after graduating. The study will eventually contribute towards the existing body of knowledge in the discipline.

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1.7. CHAPTER LAYOUT

Chapter 1 presents the introduction to the study, and explains the problem statement. It also states: the aim, objectives and the significance of the study.

Chapter 2 presents an overview/synthesis of the relevant literature that was reviewed. Contextual information relating to SL interventions in South Africa, such as the policies, are also discussed. The chapter describes healthcare professional practices, explaining the practitioners involved, and classifying the oral care practitioners in particular. Discussion of SL, its components, and its conceptualisation, including its envisaged benefits among students at HEIs, are included. The chapter also explains SL in relation to social responsibility and accountability, defines the meaning and discusses the details in the process. Lastly, the challenges in SL in the healthcare professions are discussed as part of concluding this chapter.

Chapter 3 presents details of the research methodology used in accomplishing this study. It covers the research design, explaining that the study was qualitative. The chapter describes: the study population and sample, the sampling methods used in the study, the sampling process followed, as well as the inclusion and exclusion criteria during sampling. The recruitment of study participants is also elaborated upon. The data generation methods used, data handling and analysis processes followed, validation methods as well as the research instrument, are all explained. The chapter ends with ethical considerations that were adhered to.

Chapter 4 presents the study findings, interpretations and discussions. The chapter starts with the socio-demographic outlook of the study participants, which are briefly reported. Then the main findings of this section, which make the core of the study as they address the objectives, are presented. Four themes, namely: personal qualities, relationship building, challenges of SL as well as strategies to improve the outcomes, are also presented in this chapter. Chapter 5 presents the study conclusion, and closes with recommendations.

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CHAPTER 2: LITERATURE REVIEW

2.1. INTRODUCTION

This chapter presents the literature reviewed to support the study from a theoretical perspective. The topics discussed relate to the practices of healthcare professionals in general. SL is a form of experiential learning (Fenwick, 2001), where students from Higher Education Institutions (HEI's) undertake organized service activities to meet the needs of the community. These activities are formally assessed within the learning programme where school and community collaboration are emphasized. Students learn and develop academic and social skills through this active participation, which is intended to enhance academic content learned, while addressing community needs (Wilczenski & Cook, 2009). Social responsiveness to these community needs becomes crucial, especially, when professionals were exposed to SL during their academic training (Mc Menamin et al., 2014). The following aspects: oral healthcare practitioners, conceptualization of SL as a pedagogy, social responsibility, social accountability and social justice, as well as critique of SL in the health care professions, will be discussed.

2.2. ORAL HEALTHCARE PRACTITIONERS

Oral healthcare practitioners, also called oral care practitioners, are health workers that provide care and treatment to promote and restore oral health of patients. These include oral hygienists, dentists, as well as dental therapists. Their scopes of practice differ according to the HPCSA regulations as follows: Oral Hygienists obtain a BOH degree program that runs for three academic years. A graduate Oral Hygienist does mainly preventive work in the community which includes oral health education, scaling and polishing (oral cleansing) and fissure sealants (sealing occlusal grooves on teeth to prevent acid attack). Dental Therapists also undertake a three-year degree program, of which the scope is similar to that of the oral hygienists, and they also give dental injections and do tooth extractions. A dentist is an oral health practitioner who has undergone a five-year degree program (BDS/BChD), of which scope of practice includes those of the other two practitioners, as well as Orthodontics, Prosthodontics, Paedodontics and Oral surgery.

2.3. CONCEPTUALISATION OF SERVICE LEARNING AS A PEDAGOGY

Conceptualization of SL as a pedagogy, benefits of SL to students in HEIs, development of social responsiveness among healthcare professionals, as well as the challenges faced by oral healthcare professionals, are also discussed. Service learning is a "course-based, credit-bearing educational

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experience in which students participate in an organized service activity that meets identified community needs, and reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility" (Bringle & Hatcher, 2009). As Fullerton, et al., (2015) have highlighted that SL has a lasting impact on graduates` perspectives, skills and actions, this study aims to explore the perceptions of graduates regarding the impact of SL on their practice.

2.3.1. Reflection as a major component of SL

SL provides learners and educators with a frame for more opportunities to engage in structured reflection. According to Felten and Clayton (2011), reflection is a crucial component of SL as learning occurs when students are guided to reflect on their clinical experiences and issues, whereby intellectual, moral as well as social awareness develops. Studies have proposed that connections between content and clinical experience are enhanced by reflecting on experiences. Reflections can be deliberately encouraged by educators as reflection can take place anywhere and most likely be ongoing as part of all learning (Guthrie & McCracken, 2010). Awareness about community needs creates connections between classroom academic content and practical community needs by critically thinking about the civic ideals, community principles, and universal virtues and how they relate to the course content (Heffernan, 2001). A considerable number of scholars (Giles Jr. & Eyler, 1994; Vogelgesang & Astin, 2000; Eyler, 2001; Balčiūnienė, & Mažeikienė, 2008, Schelbe, Petracchi, & Weaver, 2014; Radford et al., 2015) advocate for conceptualisation of SL into the HEIs curricula following their claimed benefits of SL. Some studies relate these benefits of SL to prior community-based experience, possession of post-matric qualifications before entering the dental degree, feminine gender and maturity age (Boysen, Salsbury, Derby, & Lawrence, 2016).

2.3.2. SL and Community-based education

According to several authors (Giles Jr. & Eyler, 1994; Knapp, Fisher & Levesque-Bristol, 2010; Anand et al., 2017; Sykes et al., 2017), SL may be unpacked as an educational approach that mbines learning objectives with community service. This is done with the view to enable students at an early stage of their academic development to provide and improve services to communities in areas where governments fail. This also ensures the provision of a pragmatic and progressive learning experience while meeting societal needs.

Community-based education (CBE), on the other hand, is a field-based experiential learning with community partners as an instructional strategy. In this exercise, idea is to give students direct

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experience with issues they are studying in the curriculum and promote ongoing efforts to analyse and solve problems in the community. A key element in these programs is the opportunity students have to both apply what they are learning in real-world settings and to reflect on their service experiences in a classroom setting. These programs model the idea that giving something back to the community is an important college outcome, and that working with community partners is good preparation for citizenship, work, and life (Kuh, 2008). Similar benefits were reported in a four-year study conducted at the dental academy of the University of Portsmouth, London where students` responses to the CBE were evaluated (Radford, Holmes, Dunne, & Woolford, 2015). CBE is part of the work-integrated learning (WIL) approaches in which emphasis is placed on the provision of Primary Health Care (PHC), where health professions education prioritizes community needs. The benefits derived from this is that students placed at these facilities are expected to develop competencies that enable them to provide preventive and curative care, community health education, service management as well as team work (Kristina, Majoor & Van Der Vleuten, 2004). The competencies include quality care, more understanding, self-confidence, personal growth; and the autonomy granted during training. These attributes are similar to those of SL (Kruger, Nel & Van Zyl, 2015). In response to the above, this study then intends to establish the existence of similar virtues among the SMU dental graduates who underwent SL during undergraduate learning. The learning is usually guided by using various models for structured reflections like the Gibb`s (1988) and John`s (2014) models. Among those reflections is self-reflection, which is a cognitive process necessary for self-regulation whereby a learner reviews current world views and/or performance in order to adapt to a more progressive standpoint or execution (Zimmermann, 2002).

It is generally assumed that oral health students who undergo SL as a teaching approach during their undergraduate training will develop many other skills such as social responsibility, teamwork, communication, problem-solving, emotional intelligence, maturity, personal growth and civic responsibility as they connect academic content and clinical experiences (Hood, 2009; Victoroff & Hogan, 2006). These connections bring about academic enhancement, as well as further strengthening SL skills (Simonet, 2008) among the students. These skills may also be viewed as matching the ‘market’ demands and increasing opportunities for employment in the country (Tumuti, Mule, Gecaga & Manguriu 2013). In South Africa, the unpleasant reality is that oral health professionals do not readily get employment as it used to be the norm in the past. Instead there is high competition for scarce job opportunities, of which the market demands professionals with employability skills, which SL pedagogy offers. Without such skills, the community-based oral healthcare suffers severe lack of readiness problems, both in the private and public facilities (Crabtree, 2013).

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Skills acquired include interdisciplinary thinking and collaborations with colleagues, improved interactions, and positive attitudes towards serving the underserved communities (Volvovsky, Vodopyanov, & Inglehart, 2014). Students have been found to value outreach educational experiences, particularly when they are afforded certain responsibilities. Confidence levels get uplifted and a sense of professional development ensues (Radford, et al. 2015; Vogelgesang & Astin, 2000). As it occurs in other parts of the globe, HEIs in Australia send their students to a SL excursion where they stay in the community for two weeks to get the actual feel of a rural environment (Lalloo, Evans, & Johnson, 2013). Students report that their lives change; they develop empathetic skills, endurance and resilience, patient communication as well as the heart to help the underserved communities. According to Phalwane et al. (2016), social responsibility and a desire to serve under-privileged communities are prominent outcomes of SL as reported by final year oral healthcare students. SL in the rural settings proved to bring about pleasant outcomes to communities.

Studies conducted in South Africa (Molete, Chola & Hoffman, 2016; Janse van Rensburg, van der Merwe, & Erasmus, 2019 and Bhayat, Vergotine, Yengopal, and Rudolph (2011), confirm the above elements as contributing to the benefits that SL offers to student learning. In agreement with a great many, Bhayat et al., 2011) allude to the fact that both medical and dental training benefit from SL. For the same reasons, the University of the Witwatersrand in South Africa sends out oral health students to Phelophepa Health train as well as other Public Oral Health Facilities (POHF) on SL excursions. The Phelophepa Health train is a mobile primary health care facility offering oral health, pharmacy, nursing, and medical services to rural communities next to the designated train stations.

HEIs sent students from the above disciplines to do SL. They then conducted the above study (Bhayat et al., 2011) with the aim of determining the impact of SL experience on final-year oral health students, from 2008-2009. The findings of that study revealed that there was improved efficiency in clinical skills, self-awareness and awareness of the community needs and social responsibility. Challenges that they experienced included strenuous and long working hours as well as non-functional equipment. Gaines-Hanks and Grayman (2009) also conducted a study where they found that SL increased awareness, relational and professional growth as well as increased gratitude among students. Phalwane et al. (2016) piloted a Community Service Attitudes Scale on the final year oral health students at SMU, where students displayed a positive attitude towards serving destitute communities after exposure to SL. The students also suggested a need for relevant stakeholders to get involved in the procurement of SL resources and in meeting community needs. The impeding challenge was a quota-driven dental training, where students are only concerned with meeting the clinical quota requirements. This attitude compromises quality of work in all respects.

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Although the local studies provide valuable information in the local context, evaluations were focused on undergraduate students' perceptions only. Almost all studies conducted both locally and internationally evaluate perceptions of students towards SL. However, we have not found any studies that have followed-up on these students after graduation as professionals in practice, that evaluate the experiences and perceptions of oral health professionals regarding how they applied the knowledge and skills acquired during oral health academic training. These South African studies have therefore highlighted the need to further investigate the usefulness of SL in oral health practice. Therefore, in this study we aim to further explore the long-term influence of SL on oral healthcare professionals, to understand the way Oral Health students experience SL while they are still at the undergraduate training in order to develop their social responsiveness when they reach practitioner level after graduation. This study; therefore, intended to identify the strengths of the SL program that SMU offers, and the weaknesses with the hope to address them for the purpose of improving the SL.

2.3.3. SL practice at SMU School of Oral Health Sciences

In an attempt to elucidate SL practice at SMU School of Oral Health Sciences, we will use two types of texts. The first one will be a flow chart which will then be supplemented by a verbal text.

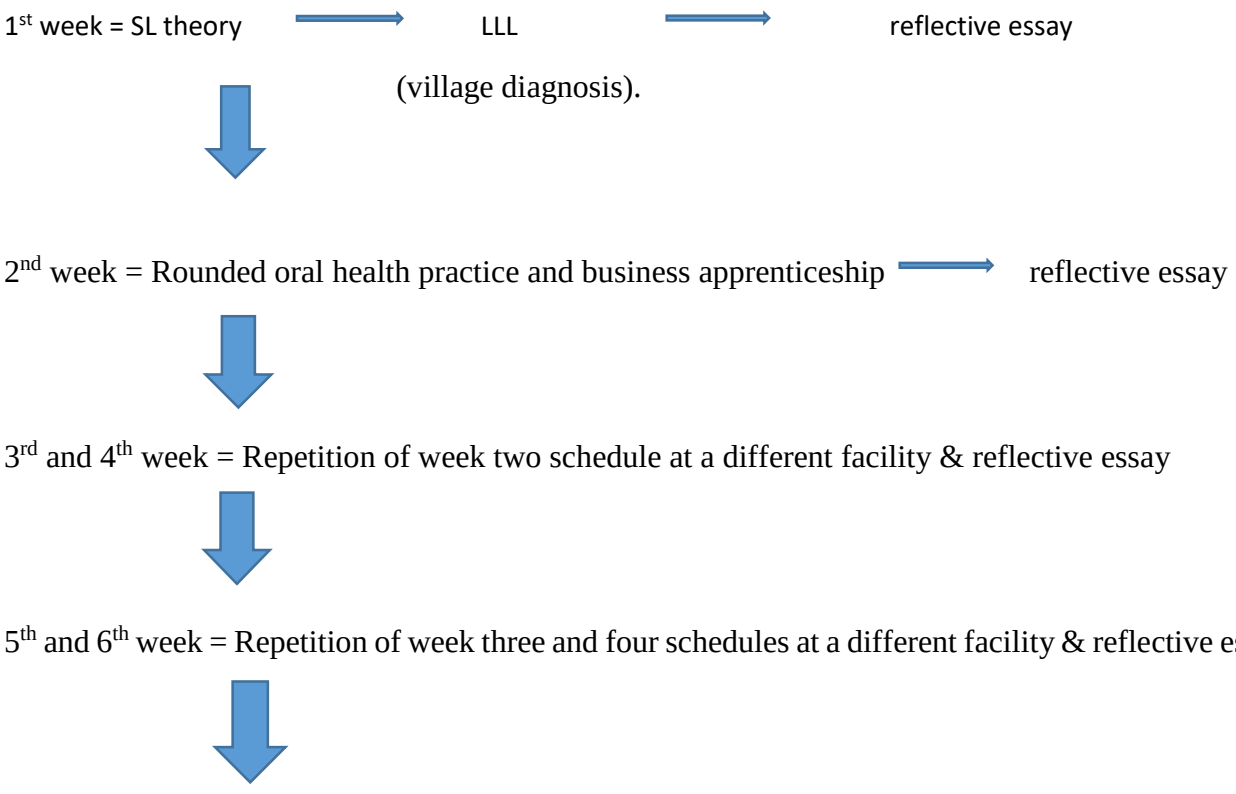

Fig 1: SL Itinerary

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The SL module runs for eight (8) weeks at intervals of two weeks at the Community Dentistry Department. The first two weeks are used to introduce SL theory to the entire final year student cohort. The students undertake an excursion by bus to the communities where the school has partnerships. The duration of the first visit is an entire day and is called Look, Listen and Learn (LLL). The one-day LLL occurs in a designated health facility.

In the LLL session, students, together with one community leader from the same community, enter the community and interview individual community members and families about their determinants of health. The aim of the LLL visit is to introduce students to the SMU community partners and to learn from observation and introductory interaction before further engagement throughout the year. During the remaining four days of the first week, the service learners (students undertaking SL) are being prepared for the ensuing SL activities by doing reflective exercises with the guidance of one departmental SL facilitator. During this period, the service learners reflect on their experiences; what shocked them, what they expected, as well as what they could improve, using the 1988 Gibb`s framework for structured reflections. These sessions prepare the service learners for the debriefing sessions which will be held after every encounter with the community members throughout the year. At the end of the four days, the students are divided into smaller and manageable groups of seven/eight. The groups rotate among different Oral Health disciplines, which are: Maxillo-facial and Oral Surgery (MFOS), Integrated Clinical dentistry (ICD), and Service learning (SL). The timing of the four two-week SL sessions shows SL occurrences in January, March, June and August. The distribution of the remaining sessions is described below.

The second week

In the second week, the first group of service learners is deployed into a different health facility where they run an oral health clinic. The service learners are given complete authority for the duration of the SL to run the clinics, with the intent to instil confidence to put into practice the knowledge and skills that they acquired for all the years in the academic program. The service learners select a manager, and several role players of relevant protocol with which they use to offer services to the community for the week. Service learners interact with community members, where they take medical and dental, as well as social history to determine the relevant approach with which to assist them. The type of assistance is determined by the kind of need/information a person presents with, from which the need is identified. Their needs mostly lead to referral to government departments such as police in cases of abuse, social development and welfare for those who need food and other basics, home affairs for those who need ID and birth certificates, medical doctors for the those who are

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physiologically afflicted with ailments, and so on. Those with Oral Health conditions are, instantly, treated by the service learners, under facilitation of an academic staff member. As part of health promotion, service learners engage community members regarding vegetable garden projects, which yield positive results. Different families practice battering of these vegetables, selling to other people, including staff members and service learners as a way in which they make money for themselves as well as feed their families. For all these activities, each service learner carries a journal, on which to write the information, including informal interviews. This information is called field notes that service learners use to write their reflective essays. Field notes are original, loosely structured, private, a little messy and subjective entries that come from students` environmental observations, as well as stories as narrated by community members about their various situations of life. They are incomplete scribblings that are not available for analysis (Emerson, Fretz & Shaw, 2011). What is necessary in these notes for our setting are the: what, where, when and who regarding the SL programme. The 'What' is required to give details about the SL, the 'Where' explains locations, the 'When' outlines time schedules while the 'Who' identifies the participants. The 'why' part is elaborated upon when students utilize the field notes to start writing the reflective essays relating to the incidences. The same journal is used to generate all subsequent field notes starting from the first one until the end of the SL sessions for the year.

At the end of the week, they write reflective reports describing: the experiences, feelings, strengths and weaknesses, areas to improve, of the SL session they went through. These mentioned improvements are used in the subsequent sessions. Different groups share their experiences as a way of learning. Where there are questions, members assist one another and the facilitator intervenes only when it becomes necessary. The reflections are assessed and graded using the rubric, which was developed by the department of Community Dentistry (Appendix I).

Second two weeks

In the second two-week session, the teams are deployed in a different health facility (SL project site). New management would be appointed on rotational roles such that everyone ends up having experienced every level of the system of Oral Health. The focus would be to ensure that service learners` strengths are reinforced in the service, and the mistakes of the past are corrected in a reflexive fashion to continue the SL that was started. In this way, the service learners are able to develop new/additional strengths. The session would also end with reflective reports in which they evaluate successes of the corrections they wanted to effect, and to also check the consistencies of the

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strengths displayed earlier. Newly identified weaknesses become targets for rectification in the subsequent sessions. Sharing of the experiences would then occur across the groups once again.

Third two weeks

This session focuses on strengthening what would have been missed earlier, and the weaknesses identified while attempting to highlight the strengths. The strengths identified previously are highlighted in order to continue this session, and the rotation of SL participation roles is repeated. Still in the presence of the facilitator, learning continues through reflective reports and formal discussions.

Fourth two weeks

The fourth and final session of SL is expected to be an improvement on the previous ones, as was the case with the earlier sessions. Roles of the participants continue to rotate, and the reflexive approach of responding to the learning obtained from subsequent sessions continues. After this session, the reflective reports were prepared twice. One report focuses on the fourth session alone, as was the case with each individual report of the earlier sessions. This report also explains how the fourth session would have benefitted from the previous sessions, and the new learning that occurred. The improvements made in the session, as well as weaknesses that may have been identified are reported. The final report is more comprehensive, covering firstly the entire SL in which the four sessions are combined in one as well as the way learning occurred.

2.4. SOCIAL RESPONSIBILITY, SOCIAL ACCOUNTABILITY AND SOCIAL JUSTICE

Social responsibility is defined as "an outcome of SL, an ethical theory that is constructed as a range of choices in which individuals are accountable for fulfilling their civic duties as professionals, in order to strike a balance between economic growth and the welfare of society and the environment" (Dharamsi, Pratt, & MacEntee, 2007). The theory of social responsibility is built on a system of ethics, in which decisions and actions must be ethically validated before proceeding. If the action or decision causes harm to society or the environment, then it would be considered to be socially irresponsible. Such actions must benefit the whole of society, and if this equilibrium between economic, societal and environmental interests is maintained, then social responsibility can be accomplished (Brondani, 2012). Phalwane et al. (2016) postulate that SL is an imperative Teaching & Learning (T & L) approach that brings about social responsibility, which is an attribute that creates a desire to serve under-privileged communities. This study followed a qualitative route, of which results suggested

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that SL had a positive influence on community service. This was reported by final year oral healthcare students, who also argued that, every individual has a responsibility to act in a manner that is beneficial to society. However, this impact may only be evaluated when there is evidence that these graduates serve the underserved without prejudice or reservations. Drawing from the above findings, the current study followed the cohort of practitioners who are now graduates in professional dental employment, to assess if the attributes mentioned above are in existence and beneficial in practice. Oral health practitioners who possess the attributes of social responsibility are expected to be responsive to the priority oral health needs of communities by committing to accountability for those needs (Woollard, 2006; Training for Health Equity Network (THEnet, 2011).

According to Fullerton et al. (2011), social accountability in medical education is a major criterion that is used to measure excellence of a HEI. This excellence is confirmed by producing healthcare graduates who, firstly, possess competencies that are known to improve the health of communities, and secondly, are able to utilise those competencies in their professional practice. Social accountability of medical schools was defined in 1995 by the World Health Organization as, ‘‘the obligation to direct their education, research and service activities towards addressing the priority health concerns of the community, the region, or nation. They have a mandate to serve. The priority health concerns are to be identified jointly by governments, healthcare organizations, health professionals and the public.” The health professionals` obligation to society should be evident in their willingness to serve the underserved communities (Fullerton et al., 2011). However, Woollard (2006) is cynical about the congruency between medical schools and the calibre of graduates they produce in relation to the priority societal needs of the 21st century. This scholar laments the increasing conflict between the societal culture where the university alumni practice, incentives, and the entire context which poses as the most powerful and influential but hidden curriculum.

Being socially accountable to community needs is a value that is developed during training at the higher learning institutions where knowledge is produced, integrated, and then disseminated to communities through community-based education initiatives and the general application in practice (Keselyak, Simmer-Beck, Bray & Gadbury-Amyot, 2006).

Social Justice is defined as the equal access to wealth, opportunities, and privileges within a society, including fair distribution of benefits and burdens, in order to achieve a basic goodness for all (Ruger, 2004). The notion of social justice is not only intellectual but also addresses the issue of care, relationships and responsibility (Hansel et al., 2017) which are some of the outcomes of SL (Megivern, 2010). It is, therefore, not possible to involve students in a conversation including SL and

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social justice, without some engagement in socio-political discourses. To show connectedness of SL to social justice, SL has shown to enhance an improved oral health service provision to communities (Megivern, 2010).

2.5. CRITIQUES OF SL IN THE HEALTHCARE PROFESSIONS

Because of its controversial nature, there are already criticisms levelled at SL educators. Among allegations is that the subject of social justice and determinants of health are claimed to thoughtfully engage students in purposeful deliberations about community issues, but such discussions also bring about political liberality, which is concerned with political correctness and often indoctrinates students into becoming politically liberal activists. The criticism adds that SL educators come to class with pre-conceived ideas to alter the students` ways of thinking under a mask of critical thinking (Megivern, 2010).

Even with the presumable progression of SL, Brukardt et al. (2004) questioned the readiness of HEIs to drive radical SL transformation as it was theoretically claimed. Saltmarsh and Hartley (2011) attested to this problem by raising questions regarding the ability of SL to bring transformation in HEIs, because of its stagnation and dissipation. The claim was based on the fact that, for a long time since its inception, SL has failed to transform HEIs into democratic, community-based generators of knowledge and action. Butin (2011) emphasized therefore that SL needs to be criticized for the following reasons:

1. the limits of SL care are not understandable, that is why its possibilities cannot be accurately estimated, such that no one can make a claim about it;
2. the SL is held behind by the destructive and debilitating binary thinking of “either-or “against its own progression, just as mankind is designed to think, and
3. the SL is more of indoctrination rather than education because it is inherently political, linking its proponents to social injustices.

Butin (2011) alleges that there are still issues with funding or financial support for engagements, departmental governance and proper partnerships formations where governance will be equally shared with community partner agents. Some HEIs are still providing service only with no engagements. Even so, Inga Balciuniene (2008) confirms that many programs taking place in communities are deemed SL; one day, two weeks, semester, and so on. Of these activities, some put emphasis on academic learning, others on community service whereas many more emphasize both service provision and student learning.

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Speck (2001) as well as Egger (2008) and Warren (2012) reported other issues of inadequate space in the project sites, causing inconveniences to student learning. These included: insufficient organizational structures, inadequately trained staff, unclear staff roles and faculty work-load. There was also a notion of indoctrinating students to become philanthropists in a politically unfair capitalistic environment that is known to be an everlasting legacy of oppression, which is not going to improve. Egger (2008) agreed profoundly with Speck (2001), stating that SL wastes students` valuable time for other courses, meanwhile it is actually a promotion of communitarian, anti-individualistic social agenda that is wrapped in a veneer of learning over community service. They argued that, that practice is very harmful to students learning. Warren (2012) argues that most studies attest to the benefits of SL. However, none of them ever explains how that particular theory around SL was developed. In agreement with this argument, Kalantharakath et al. (2013) questioned the legitimacy of the claim that SL pedagogy prepares dental graduates to become independent, socially responsible and accountable practitioners.

Studies in Australia (Lalloo, Evans & Johnson, 2013; Volvovsky, Vodopyanov, & Inglehart, 2014 and Iyer, Carrington, Mercer, & Selva, 2018) added to the arguments by indicating that some students were excited at the beginning of their study program, but their enthusiasm waned as the years progressed. This decline was anecdotally attributed to outdated, non-functional equipment or a complete lack thereof, and long tedious days away from campus, where there was often a lack of food and clean drinking water. These challenges elicited reports pertaining to SL training programs, whether professionals trained are socially responsible, culturally sensitive, and if they are willing to serve the underserved communities (Mathieson, Gross-Panico, Cottam, & Woldt, 2013).

These criticisms lead to resistance of some managements and faculty to curricular changes in support of SL programs. These issues lead to more problems in different healthcare disciplines resulting in departmental fragmentations, where there are isolations as opposed to collective organizational effort. As a result, faculty experiences disengagement of expertise and a culture of argument instead of public discourse and scholarship. Further arguments were relating to power imbalances among the staff, lack of policy on reporting patient abuse and neglect when the project ends, as well as patient psychological preparation for this closure as mentioned by Schelbe, Petracchi and Weaver (2014). Faculty attitudes, which also contributed to this dissatisfaction was mentioned, but is rarely studied and understood. These arguments brought about the need to decentralise classroom and place community at the centre of the learning process (Heffernan, 2001).

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2.6. CONCLUSION

In this chapter, I have included the definition as well as the conceptual framework of SL. I have also explained some key benefits in utilising SL as a pedagogy in the oral healthcare professional education and practice. This was evident with regard to cognitive development, social responsibility and responsiveness to community needs, as well as development of positive attitudes of citizenry among HEIs. SL pedagogy and how it provides access to oral healthcare among most underserved communities through provision of employability skills such as: caring, communication, interpersonal relationships and non-judgemental attitudes, have been outlined. For example, clients can approach such a service provider without fear of prejudice. Further to that, observation shows that lack of management support brings about many challenges to the implementation process which makes it necessary for the multi-disciplinary dialogue if SL has to be sustained in HEIs, albeit in resource-constrained environments. Reflections as major components of SL have been briefly explained, as well as what Community-Based Education (CBE) is about. Social responsibility, social accountability as well as social justice and their connectedness have also been clarified. Critiques of SL have been included in the chapter. In the following chapter, we present details of the research methodology used in accomplishing this study. The chapter covers the research design, the study population and the sampling methods. The invitation, and data generation processes are also explained. An elaboration of how the data were managed and analysed is also provided.

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CHAPTER 3: RESEARCH METHODOLOGY

3.1. INTRODUCTION

A research paradigm can be defined as a pattern or model or shared way of thinking about some aspect of the world. Research paradigms align with either quantitative, in case where responses (research data) are reqiured in numeric form; or qualitative methods of data generation where responses are non-numeric (Oates & Davidson, 2015). This study has employed qualitative methods, which entailed making realistic and rational conclusions about a phenomenon or issues of concern by combining empirical observations with logical reasoning. According to Creswell and Creswell (2017), qualitative research focuses on exploring, examining, and describing research subjects and their standard settings, as well as the perception of relationships and authority between the researcher and study participants. Moreover, in the interpretivist paradigm, the beliefs, values, and actions that the researcher possesses unavoidably shape the research process. Several authors (Creswell, 2014; Smith & Osborne, 2015; Alase, 2017) inform that the strength of an interpretive study is that there may be additional insight and openness as the researcher communicates with peers. The interpretivist approach has underpinned the research strategy and the design thereof. In order to create an in-depth understanding of the context, I explored the newly qualified oral healthcare practitioners' experiences of the perceived influence of service learning (SL) on their practice.

3.2. RESEARCH DESIGN

According to Gill, Stewart, Treasure and Chadwick (2008), the research design enables the research question to be answered, and provides a strategy based on the underlying philosophical assumptions, for identifying the selection of study subjects, the data generation and the data analysis methods used in the study. This study followed a case study research design in Community Dentistry Department of the School of Oral Health Sciences, Sefako Makgatho Health Sciences University (SMU) with the focus on developing an in-depth understanding of the impact of SL as self-reported by newly qualified oral healthcare practitioners. The case study approach is used when the study aims to elicit detailed insight into the reality or experiences of that single situation or case, and its complex relationships and processes. The boundary between the case and its contextual conditions are sometimes not evident, according to Maree (2016), who then advises on the 'boundedness' of the case about time and place. In this study, therefore, the focus is the case of oral healthcare practitioners who had already graduated from SMU as at year 2018.

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Many qualitative research studies are exploratory because, according to Berg (2004), they aim to develop a new understanding of the phenomenon being studied. Interpretivist research focuses on the qualities of entities, processes, and meanings that are non-numerical, and in Creswell's (2014) description, they respond to explain the 'what', 'how', 'when' and 'where' of the occurrence of the phenomenon. This study is, therefore, an exploratory study that was conducted within a phenomenological qualitative approach. This means that the study sought to explore the experiences of the participants regarding their lived experiences as oral healthcare practitioners who were exposed to SL pedagogy during their final year of undergraduate study.

Semi-structured interviews were used for data collection, undertaken by the researcher. The research participants were requested to describe their personal experiences in their actual practice of SL. Meanwhile, the researcher attempted to uncover the meaning of those lived experiences for each participant, without unduly influencing them with their personal opinions or bias. The intent of using qualitative methods is to collect as much subjective information from participants as possible. This is done with the view to, meaningfully, answer the research question informed by evidence. There was no pre-determination of the study findings.

3.3. POPULATION AND SAMPLE

3.3.1. Population

The population for this study was drawn from SMU, a university located in a Township of Ga-Rankuwa in Pretoria, South Africa. Fusch and Ness (2015) aver that qualitative research does not require the sample size to be large in order to understand the details of the phenomenon, but that a sufficient number of participants is needed to reach saturation. On the contrary, Varpio, Ajjawi, Monrouxe, O'Brien and Rees (2017) challenge the concept of saturation in the sense that, saturation can never be conclusively achieved because there is always potential for discovering new information with further interviews. Furthermore, if data generation and analysis were not conducted concurrently in iterative cycles, it would not be possible to claim saturation as an endpoint to data generation. Their third argument is that, funded research projects already stipulate the number of participants, the length of interviews as well as the entire data generation process from the proposal and planning stages. Therefore, the data generation process of this study, has no claim of saturation for any reason.

In this study, all available oral health professionals who graduated with BDS (Dentistry), BDent Ther (Dental Therapy) and BOH (Oral Hygiene) degree programs at SMU from the years 2015-2017 were

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invited to participate in the study. Only oral health professionals who remained in South Africa were relevant sources of the data for this study.

3.3.2. Selection of participants

The study adopted convenience sampling method in which the sample nevertheless provided adequate variation, richness and depth of responses, which enabled detailed exploration and understanding of what it means to practice dentistry in the community after going through service learning (SL) exposure at SMU. By virtue of having gathered the experience required during dental training, available participants were then identified by using the departmental class lists which bear their names, email addresses and telephone numbers. The class lists were used for verification and included diverse socio-demographic characteristics, various specific individual experiences, previous qualifications and potential challenges in practice.

The three distinct groups involved were BDS, BDent Ther and BOH graduates as described in section 3.3.1. I; therefore, drew as many participants as were available from each of the groups for maximum variation of responses. The initial aim was to recruit 36 participants, with twelve from each degree programme, where four would come from 2015 graduates, four from 2016 and the last four from 2017. This intention was not achieved due to limitation of time to do the project as well as various professional commitments of the participants at different provinces. Therefore, the evenness of the frequencies could not be kept as planned. Instead, twenty-two oral health professionals could be reached, kept in the study, and were interviewed, as they responded positively to the calls to participate. This is so because they are the only ones who honoured their contract with the researcher. Failure of the majority was due to a coincidence between circumstances beyond their control and the actual predetermined time for data generation. These were nine from BOH, five from BDent Ther and eight from BDS group. Biographical details of participants were confirmed at the start of all interviews (see section 3.5 ‘Research Instrument’ below).

3.3.3. Inclusion and Exclusion criteria

The oral health graduates who participated in SL from 2015 to 2017 and were still in South Africa at the time of the data generation for this study, were included in the study. This is because they were expected to easily be able to recall their experiences, and reflect on the ways in which SL had shaped their clinical practice. Oral health graduates who graduated on or before 2014 were excluded from the study and no attempt was made to contact those who had left the country.

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3.4. RECRUITMENT OF PARTICIPANTS

In order to assess eligibility and willingness to participate and to make preliminary arrangements for further contact Initial contact was done telephonically. New e-mail addresses and any other preferred means of contact were produced where information on existing records could have changed. Additional attempts were made to contact individuals who had indicated that they were willing, but had not answered/returned the initial call for whatever reason. Any participant who indicated unwillingness to participate was excluded from this study. Appointments and arrangements were made for interviews to take place at a mutually convenient time. I visited participants at the healthcare facilities where they were working, for one-on-one interviews. A suitable venue that allowed for privacy with no interruptions was used to conduct an interview in each situation. An audio recorder was used as per permission of the respondents. Also, permission was sought from the facility managers for venues as well as the time to conduct these interviews.

3.5. RESEARCH INSTRUMENT

A two-part interview schedule (Appendix D) was developed from questions that were adopted from Shiarella, McCarthy and Tucker (2000) and Boysen, Salsbury, Derby, and Lawrence (2016). The first part consisted of socio-demographic factors and measures of attitudes and perceptions of the dental health practitioners on the impact of SL (section D1 of Appendix D: Demographic Questionnaire). This part required information on: participants' age, gender, ethnicity, length of training time, previous work experience, academic qualification and the type oral health qualification of the three programmes, length of time in practice, experiences in current practice, and localities of both work and domicile (rural, semi-rural, urban or peri-urban). The second part (D2 of Appendix D) comprised five items with both open-ended and closed-ended questions to probe the influence of SL during their undergraduate practice as students (before, during and after the placement at the SL projects sites), impact on post-graduate practice, as well as comments and suggestions regarding SL in the university. The information on the interview schedule covered: theoretical aspects, reflections, detailed information on the SL domains of social responsibility, academic development (which included problem-solving skills) and personal growth (which included interpersonal and leadership skills). Though there were pre-formulated questions which served as a guide, the researcher was flexible in relation to the order of questions. This enabled the flow of conversation.

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3.6. DATA GENERATION METHODS

Interviews are a suitable data collection method for a qualitative study because they enable the collection of detailed information relating to a research phenomenon. An interview entails a process of a conversation between the researcher and the participants; it is done with the view to obtain information from the participants. In this study, semi-structured interviews undertaken by myself, were used for data collection. I began by describing the purpose of the interview and the study, as well as encouraging participants to ask for clarification of any questions that may be unclear. Data were generated from SMU oral health graduates at their places of work. The audio recorder was switched on and confidentiality assured, followed by the interview questions. Each participant was asked the same number of questions and recorded the same way using the same audio recorder. The length of time taken was determined by the participant time taken to respond. Interviews took between seven (only one participant) and 30 minutes. Most of them exceeded 20 minutes. The manner in which they were responding to questions was free and without fear of power differentials. I addressed them as colleagues, and they were not intimidated by the fact that I used to be their lecturer. The research participants were requested to describe their personal experiences in their actual practice of SL. Meanwhile, I attempted to uncover the meaning of those lived experiences for each participant, without unduly influencing them with my personal opinions or bias. The intent of using qualitative methods is to collect as much subjective information from participants as possible in order to meaningfully answer the research question informed by evidence. There was no pre-determination of the study findings. I also probed using additional questions to clarify issues that emerged from the participants, which had not been prepared beforehand (Gill et al., 2008). The English language [medium of instruction at SMU] was used in the interviews because participants were from different cultural backgrounds. Some participants volunteered to come to the researcher's institution for the interviews instead of the interviewer visiting them.

3.7. DATA HANDLING AND MANAGEMENT

The completed records of participants were filed away before the interviews. After the interview, the recorder was switched off and data downloaded onto a hard drive. Recorded data were transcribed verbatim and converted into a useful format (written scripts), using Craver (2014) guidelines for thematic content analysis method. Participants' names were replaced with codes to ensure confidentiality and anonymity, called Analysis Coding. The codes begin with the question number, followed by the letter C together with the code number, and the participant number, e. g., Q1-C001-P1.

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3.8. DATA ANALYSIS PROCESS

Qualitative research methods analyse words that are not reducible to numbers (Braun & Clarke, 2013). Analysis of qualitative data entails an ongoing and iterative process (Auriacombe, 2010; Ritchie & Lewis, 2003). This implies that data generation, processing, analysis, and reporting are entangled, and not merely a linear pattern consisting of several successive steps.

Rabiee (2004) and Craver (2014) explain that the thematic content analysis approach entails: transcription, familiarisation, coding, developing a thematic framework, defining and reviewing themes, report writing, indexing, charting, mapping, and interpretation. I read the transcripts, and identified preliminary themes according to the questions asked, which ended up with too many themes. To ensure a robust process of data interpretation, in an iterative fashion, numerical codes were allocated per question. Initial codes were found to be personal awareness, formulating relationships improving services (van der Berg Cloete et al., 2016; Varpio et al., 2017). The entire process was guided by project supervisors as I had no prior experience. This process involved multiple discussions with the co-supervisor on the interpretation of the data, continuously reorganising the emerging themes until agreement could be reached. I myself as the researcher was, however, left with the autonomy to make final decisions on the interpretation of the data because of my thorough understanding of the context. An iterative process was, therefore followed to develop themes that assisted in responding to research questions and aligning answers given to the questions asked. Interrelated categories were combined to form broad overarching themes during this process. Detail of this is provided in the next chapter.

3.9. METHOD VALIDATION

In line with recommendations for quality in interpretive work, this topic is presented as reliability of the research instrument and validity of data (HArchibald, Radil, Zhang & Hanson, 2015). However, Weber (2005) outlines the criteria for evaluating knowledge production claims, which should include credibility, transferability, dependability, and confirmability. These are explained as follows:

3.9.1. Credibility

In qualitative research, the word c*redibility* refers to the truth value of research results, which Oates (2015) explains as entailing ways to ensure that the reader will believe the findings of the study. I; therefore, performed a credibility check of the data analysis. However, being someone who fully understands the lived experiences of participants, bracketing out (Tufford & Newman, 2012) my

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preconceptions during the interpretative process was a challenge. In order to minimise the influence of my own opinions, I kept reflecting about my engagement with the data and focused on the research objectives. I did crosschecking that the interpretations were a true reflection of the information communicated to me by reading the transcripts many times, until I was soaked in the data for vivid interpretation and crystallization of participants` views (Guba & Lincoln, 1981; Krefting, 1991). This approach brought about theoretical accuracy because participants described their own lived experiences that enhanced trustworthiness and relevance in their descriptions (Beck, 1993; Yieh, 2010). Participants underwent SL experience, gathered knowledge and skills at the university, so they had perceived knowledge, which gave them expertise in the subject under study (Yieh, 2010). From the SL reports, I acquired a comprehensive meaning from interpreting transcript information. Data were analysed three times, giving me analytical preciseness (Krefting, 1991; Beck, 1993). I followed a methodology, which I have fully described, which anyone can replicate in a different setting if they need to. I have abided by the ethical guidelines throughout the study.

3.9.2. Transferability

Transferability of a research study, which has a great deal to do with other research contexts, refers to the ability of another researcher to make connections between elements of a study and their own experiences or researches (Oates, 2015). Therefore, transferability can be referred to as the degree to which the results of qualitative research can be generalized or transferred to other contexts or settings. Miles, Huberman and Saldana (2014) counsel that in order to assist readers to know if the findings are transferable to other similar contexts, the researcher should provide detailed information about the context used in a study in the report. In this study, I have endeavoured to provide all details that are relevant to the design, methodology and the study objectives. Though transferability enables benchmarking by other researchers and users of study results, it is not equivalent to generalizability claims, even though generalizability encompasses *transferability (*Trochim, 2006).

3.9.3. Dependability

According to Oates (2015), *dependability* of a study aims to ensure that the research process has been done with reasonable care addressing issues of quality and integrity with consistency. As a result, I have documented the entire research process followed, and included a record of the coding decisions made during the research in order to assist readers to understand the reasoning process as well as the limitations of the study.

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3.9.4. Reflexivity

Reflexivity means thinking about thinking, something that goes beyond reflection. It involves "examining yourself in relation to others" (Darawsheh, 2014). In this instance, it is the way the researcher handles relationships with their participants and the research process from data generation stage, data analysis and interpretation up to reporting of the findings. To avoid undue bias in the process, I had to consciously focus on asking relevant questions from the interview guide, by probing appropriately for deeper answers without veering off from the topic, as well as being aware of what I am reporting and how I am reporting it. I had to continuously reflect about participants` demographics, my cultural background and how this can influence my thoughts and assumptions, as well as actions in relation to reporting the findings (Darawsheh, 2014).

3.10. ETHICAL ISSUES

It is expected in any research that participants are protected from harm during any stage of the research, but mainly during data generation and in reporting (Kaiser, 2009; Roffee & Waling, 2017). Approval was therefore sought from and granted by the research ethics committee of SUN, **HREC Reference #** S18/05/102 (Appendix A). In this study, data were generated using one-on-one, face-to-face interviews. Permission to conduct interviews was obtained from SMU School of Oral Health Sciences, as well as from healthcare facility managers where participants were working. In order to comply with ethical research principles, I informed the graduates that they participated on a voluntary basis, and that they might withdraw their participation whenever they felt uncomfortable, and would not be required to provide reasons or justification for that decision. None of the participants withdrew from the study. The participants were informed about the purpose of the study, risks, benefits, audio recording, and time required to conduct interviews. All those who consented to participate were required to sign a form before agreeing to respond to the research questions. Interviews were conducted at different places at the participants' convenience using an audio recorder, which were then downloaded to PC that was password-controlled. Both the audio recorder and the PC were kept in a locked office at the School of Oral Health Sciences, Department of Community Dentistry at SMU. To ensure anonymity and maintain confidentiality, I refrained from divulging the participants' identities in the final report, or to any third party.

3.11. CONCLUSION

This chapter described the research methodology undertaken in understanding the perceptions of newly-qualified oral healthcare professionals about their exposure to service learning in their final

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year of training at the Sefako Makgatho Health Sciences University. The research design was explained and also the evaluation methods followed. This was followed by ethical issues, contributions of the study, limitations and future research. The data analysis, findings, and discussions are presented in the next chapter.

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CHAPTER 4: FINDINGS AND INTERPRETATIONS

4.1. INTRODUCTION

Details of the research methodology applied in conducting this study were presented in the preceding chapter. This chapter presents the study findings from the data generated using interviews with the oral health professionals of study interest. In order to discuss these findings, the main research aim is re-stated, which is, *"to explore the perceptions of oral health professionals regarding the impact of service learning (SL) on their current practices"1.5.1, p. 4.*

In addressing this aim, the study objectives were to determine the self-reported experiential practices of oral healthcare professionals, how they applied knowledge, skills and the attitudes that developed during SL. This was done by evaluating their level of self-perceived social responsiveness to community problems, and determining their perceptions regarding their academic development during undergraduate training, including challenges that were encountered.

Addressing these objectives has provided a clearer understanding of the observed impact of SL on the current practices of the health professionals who undertook SL training prior to being deployed to community service sites. Information from health professionals in three (3) different oral care categories (BDS, BDent Ther, and BOH), who completed in the years 2015, 2016 and 2017 at SMU was obtained. Data were generated from 22 participants outlined in Table 1 below, as well as reporting done on them. To identify and locate the study participants for the purpose of this report, a register called the Participant Socio-Demographic Register was formulated.

4.2. SOCIO-DEMOGRAPHIC INFORMATION

Social-demographic variables of the study participants are reported in this chapter, namely; age, gender, race, post matric qualifications, their residences, dental qualifications, their practice localities (rural or urban), practice residence preferences, year of SL, previous community services, and their frequencies of community service (for those who were involved).

4.2.1. Biographic information of study participants

The study results demonstrated that most participants were between 21 and 25 years old (9/22), with the fewest being between 31 and 35 years old (2/22). There were more females (15/22) than males (7/22) in the study, with the most intakes having diplomas/certificates (50%). Most were staying and practicing in urban areas (17/22). An equal split (11/22 each) of preference to practice in the public

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sector versus the private sector was obtained. There was also an even split between urban and rural residence preferences (50% each), with BOH having most participants (9/22), BDT having the least (5/22) and BDS having a moderate count (8/22) of participants. Those who completed their final year in 2015 were the fewest (6/22), while the 2016 and 2017 were the most at 8/22 each. Furthermore, those with prior experiences of community service before doing SL were the least (7/22), and out of these, most were on monthly-basis (4/22).

The following table summarises the above results.

Table 1: Participant Socio-Demographic Register

NO:	Age	Gender	Race	PMQ	Degree	Res	Prac Res pref	Prac	Pref sector	Year of Completion	Comm Serv	CSF
1	26-30	F	A	D/ C	BOH	U	U	U	Pr	2017	Y	2-4
2	21-25	M	A	D/ C	BOH	U	R	U	P	2016	Y	2-4
3	26-30	M	A	N	BOH	R	R	R	P	2016	N	NA
4	26-30	M	A	D/ C	BOH	R	R	R	P	2017	N	NA
5	21-25	F	A	N	BOH	R	R	U	SE	2017	N	NA
6	26-30	M	A	N	BOH	U	U	U	Pr	2015	N	NA
7	40yrs+	M	A	D	BDS	U	U	U	Pr	2016	N	NA
8	40yrs+	F	A	D	BDS	U	R	U	P	2017	N	NA
9	21-25	F	A	N	BDS	U	U	U	P	2017	N	NA
10	21-25	F	A	D	BOH	R	R	U	P	2016	N	NA
11	31-35	F	A	D/ C	BDS	R	U	R	SE	2015	N	NA
12	21-25	F	A	D/ C	BOH	U	R	U	P	2015	Y	O
13	31-35	F	A	D/ C	BDT	U	U	U	P	2015	N	NA
14	40yrs+	M	A	D	BDS	U	R	R	P	2016	Y	mon
15	26-30	F	W	D/ C	BDS	U	U	U	SE	2016	N	NA
16	26-30	F	C	D/ C	BDS	U	U	U	Pr	2015	Y	mon
17	21-25	F	A	D/ C	BDT	U	U	U	Pr	2017	N	NA
18	26-30	M	A	D/ C	BDT	U	U	U	SE	2016	N	NA
19	21-25	F	A	D/ C	BDT	U	R	U	SE	2015	N	NA
20	26-30	F	A	D	BDS	U	R	U	P	2017	N	NA
21	21-25	F	A	N	BOH	U	U	U	P	2016	Y	mon
22	21-25	F	A	D	BDT	U	R	U	SE	2017	Y	mon

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4.2.2. Key to Table 1 acronyms

A:	African	mon:	Monthly
B:	Bachelor's degree	N:	No
B Dent Ther:	Bachelor of Dental Therapy	N/A:	Not applicable
BDS:	Bachelor of Dentals Sciences	P:	Public
BOH	Bachelor of Oral Hygiene	PL:	Practice Locality
Comm Serv:	Previous Community Service	PMQ:	Post Matric Qualification
CSF:	Community service frequency	PR:	Private
D/C:	Diploma/Certificate	PRP:	Practice Residence Preference
EPref:	Employment Preference	R:	Rural
F:	Female	SE:	Self-employed
I:	Indian	U:	Urban
M:	Male	Y:	Yes

Table 2: Description of Participant Socio-Demographic Information with Related Acronyms

Age in years 21-25: 9 26-30: 8 31-35: 2 36-39: 0 40+: 3	Gender Male (M): 7 Female (F): 15	Race 20/22 of the participants were of African (A) descent.	Post-Matric Qualification (PMQ) Diploma/ Certificate (D/C): 11 Bachelor's degree (B): 6 No PQM (No PMQ): 5
Dental Degree Pursued BOH: 9 BDT: 5 BDS: 8	Residence (Res) Urban (U): 17 Rural ®: 5	Practice Locality (PL) Urban (U): 18 Rural ®: 4	Practice Residence Preference (PRP) Urban (U): 11 Rural ®: 11
Year of completion (YC) 2015: 6 2016: 8 2017: 8	Employment Preference (EPref) Public (P): 11 Private (Pr): 5 Self-employ (SE): 6	Community Service Frequency (CSF) Once per year (O): 1 2-4 times per year (2-4): 2 Monthly (mon): 4 No applicable (N/A): 15	Previous Community Service (Comm Serv) Yes (Y): 7 No (N): 15

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4.3. THEMES FORMATION

Chapter 3 (section 3.7) alluded to the use of thematic content analysis for data analysis in this study, and the approach of thematic content analysis was explained in section 3.8. This section presents the findings from the approach. The main four themes identified are "personal qualities", "relationship building", "challenges related to SL" and "strategies to improve the outcomes". All themes identified result from the data generated by interviewing 22 participants. There is; however, plentiful overlap between the themes as they speak about service learners, faculty as well as communities. Themes are related to the impact of SL on the oral practitioner and their practices. The themes and sub-themes are summarised in Table 3 below (section 4.4).

4.3.1. Theme 1: Personal Qualities

4.3.1.1 Personal attributes

Most participants reported that they enjoyed the learning opportunities of the SL experience that gave them time to reflect on the self. This brought about self-awareness, which built their character and helped them to develop personal attributes such as empathy, compassion, humility and emotional intelligence. This is in agreement with Kruger, et al. (2015), the students could thoughtfully embrace diversity amongst themselves, among community members and faculty. Having learned this, it appears that they became more culturally sensitive and empathetic towards destitute and underserved communities, self-reporting that they were no longer negatively disposed towards persons who were illiterate, of low socio-economic status, and people afflicted with oral, social and general health conditions.

Self-reflection: *"I was engaging with some of my colleagues, we were reflecting on the experience that we had when we went to Salvokop specifically." -P21.*

Builds character: *"SL gave us…focus, builds character, helps one to grow mentally, emotionally. It helped me refine my skills, my problem solving abilities…"*-P21.

Empathy: *"With SL, you offer the best service that you can. You are likely to change, have like a change of heart. If you are not an empathetic person or you become an empathetic person*"-P1. *"I use skills from SL to allay the patient`s fears, engaging the patient until they calm down."-P19.*

Enjoying the cultural sensitivity: *"We were meeting different people from different cultures, learning all sorts of things. It widens your experience."-P7. "SL helped me a lot at school, it was fun*

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and nice. I learned a lot of things. It was not only about Dental patients, but we had to see how else we can assist the patient." -P19. *"I took whatever I learned from SL and incorporated it onto my community service this year. And what I`m doing now as a community service dentist is what I learned more when I went to SL project areas . . .."* -P20.

4.3.1.2 Community as educator

The participants likened their services to students and communities learning from each other, as one remarked: *"SL is a good initiative and should be continued. I was able to work with and learned from completely different communities at the Western Cape. I was humbled by the way other people have accepted their heart-breaking situations. I also got to learn some few Xhosa and Afrikaans words." -P22.* This is in agreement with Cruz and Giles (2000) as they also made mention of the community viewing students in a positive light by taking part in preparing these future professionals.

4.3.1.3 Enhanced professional skills

From a learning experience, participants enjoyed a sense professionalism and open-mindedness with which they could improve communication by confidently building rapport with each other, with community members and faculty. They had refined clinical skills and were also able to make decisions regarding their duties and efficiently achieved their expected results.

4.3.1.3.1 Confident and autonomous decision-making

SL seems to have assisted in developing decision-making skills of the oral health students in training: "*Ever since the SL experience, I am very confident; I can make my own decisions.*" -P5. "*Once you are out there you learn to trust your instincts. I realised that I have so much potential. You actually do a proper job. Because of the confidence you build daily. I also increased the working speed*" -P5. This corroborates with Dharamsi, et al. (2007) when they echoed that students' decision-making is a sign of becoming socially-responsible.

4.3.1.3.2 Learning through team collaboration

One impressive milestone of SL is the students' teamwork, similar to what Kristina et al. (2004) said regarding development of competencies such as teamwork: "*I remember there was a case where we could not get this guy's tooth out at a mobile clinic. Then the next minute, his tooth went missing. We took him with us to campus oral health clinic where we took a Panorex radiograph, and there his tooth was inside his sinus. I always remember that case before I extract maxillary teeth. That taught*

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me to avoid digging around to where people's sinuses might be that has actually shaped what I am doing now. I always remember that case, and I tell patients also that if they don't understand why I am referring them, we need to engage. I always use that example. It was a good experience."-P16.

4.3.1.3.3 Sense of achievement

Participants found the fulfilment of a job well done in SL experiences: *"And you feel that sense of achievement because you did a good job. You work without an external pressure like somebody pestering you. I even realised that you can do a good job provided you are relaxed, and not stressed up, in an environment where you are not tense."* -P5. This shows that the participants considered SL as an experience for their self-fulfilment as oral health practitioners.

4.3.1.3.4 Improved communication

The SL participants were adamant that these sessions assisted them in the development of good communication skills: "*I am able to soften patients by talking to them like I`m talking to someone I know, and not a stranger that you just seeing now. I communicate well until the patient kind of forgets that they were told that the dental procedures are painful. When I start working I make sure that I explain everything to them and when I start cleaning I do the one side and I ask the patient if it is painful or should I change the pressure."-P19.* "*I developed rapport to the extent that I can talk to them about almost anything that bothers them as community members. I am able to give them advice if they have any problem."-P22.*

4.3.1.3.5 Improved patient and time management

The participants indicated that the SL exposure improved their management of time with patients: "*I am able to control the patients, and especially children. There are some adults who are also anxious and I now know how to handle them. It is all thanks to SL exposure that we had."-P7. "The work done at Phelophepa helped me to better effectively use my time as there was a lot of patients. It improved my speed to see the patients effectively but also to see them in the allocated time."-P15.*

4.3.2. Theme 2: Building Relationships

Over and above personal attributes that participants reported to have gained during SL, they also expressed that SL is important in building workable relationships that bring about solutions to students, faculty and communities` oral health problems. Participants; therefore, said that SL exposed them to human service in that they became more aware of community needs, became socially

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accountable to create public awareness regarding oral health problems in communities, which would bring the most needed access to services. They felt morally obliged to plough back and SL became their 'road-map' to the current practice.

4.3.2.1 Student-community collaborations

4.3.2.1.1 Students assumed multiple roles in communities

The participants seemed to have assumed multiple roles when the students on SL collaborated with communities. Among these roles, they each viewed themselves as: "*Community educator"-P5; "difference-maker and health promoter"-P6; "at home"/ "part of the community"-P7 and P12; "community assistant"-P8, "game-changer and awareness creator"-P10; "team player"-P12; "Community advocate"-P13; "community role-model"-P14; "community trustee"-P15; "healthcare provider"-P20; "access provider"-P22.*

4.3.2.1.2 Students were more influential to communities

In their self-judgement, the SL participants seem to have found themselves making a positive contribution in the lives of the dental patients. The following quotes confirm this notion. "*I am a good influence. I inform them about the oral health issues that they do not know. I do what I can to educate them they can have dentures, which they can eat with, and this can boost their immune system running properly because with better feeding you get better health. -P1. "I see myself as a difference maker, a person who helps the community beyond dental problems. Those who are unable to access healthcare, we take healthcare to them through health promotion."-P6. "I get a lot of Patients in my practice, just for getting out there and talking to them. That's when they realise that they have problems. In my neighbourhood I am an educator, an Oral Health Promoter I am an awareness creator -P17.*

4.3.2.1.3 Students and communities enjoyed mutual relationships

The learning from SL activities was said to be unselfish in a give-and-take pattern: *"I enjoyed the SL project, we had the opportunity to engage with diverse communities in different environments addressing real community needs together with them. Most of their identified needs were relevant to our course content. This increased my lateral thinking to suggest probable solutions. SL helped me to develop the ability to function under any circumstances and accommodate different suggestions from the clients and colleagues. Working in such a manner, increased the requisite mutual, trusting and respectful* ***relationship****."*-P10.

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4.3.2.1.4 Learning was reciprocal

"*In SL we learned a lot of stuff from patients about their contexts, much as we were also educating the patients. There the emphasis is on Preventative Dentistry, and part of Preventative Dentistry is that educational component, where the community learned from students' expertise. And I feel that was only emphasised in the SL component of Community Dentistry."* -P16. This growth/development is more notable as it is shared among several people. This experience corresponds to the one in a study by Gaines-Hanks and Grayman (2009), in which reciprocity was emphasised. Communities receive service, as students learn from the experiences.

4.3.2.1.5 Team player in the community

The participants claimed to have been team players in the community. Examples of expressions confirming these are: *"At the school campus, it`s just a patient and it ends there, but in the community you get to mingle with the people."-P2. "I would not have been able to be such a team player in the community, if I did not understand social issues that* ***community members*** *are faced with."*-P12. Consequently, SL provided the students with skills to be able to participate in communities as role players in teamwork.

4.3.2.2 Awareness of community needs

Because of SL exposure, the participants were able to understand the contexts of their work more clearly. These notions are expressed in the quotes *"During SL, I learned that it's not about the quota but about the person. "-P2. "This program has actually assisted me on how I perceive patients. I was shocked to realize that other communities are not aware of simple dental treatments." It gives a light that what you normally see in the campus clinic is different from what you see outside. Out there it is worse, it gets terrible, because you see the worst case scenarios." -P3. "You see their background and that will help you to understand how the person`s day to day living affects their health in general. It does really help you to treat the patient better. -P4. "We are able to see the needs of the community and their personal needs as a member of that community, we were able to* ***understand*** *our patients better. "-P6.* The exposure to communities through SL provides an invaluable lesson to the students about the needs of communities.

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4.3.2.3 Social accountability

4.3.2.3.1 Treating communities with dignity and respect

The participants learned the value of accounting to society when engaging with their professional mandate, as shown in the quote "*In private practice, patients come with medical aid, have money, people who are knowledgeable. So because we treat everyone with dignity they do come back again*." -P3. *"After SL was introduced to us, we were able to understand that a patient is more than just a toothache. A patient is part of a community, who needs access to a healthcare facility, and how far they actually have to travel to get this access. So after being exposed to SL, that we don't just postpone appointments. We don't just treat a patient and say come back this other day. We look at these demographics as they guide us as to how we prioritize our patients." -P6.*

4.3.2.3.2 Link to access provision

For the many patients who lacked awareness of where to obtain assistance on several needs regarding oral health and other needs, the participants were happy to assist with knowledge that would link the community members to the helping points. These insinuations as expressed in *"I feel like I am that channel of information. With the information that I have acquired at SL I have become the medium or the channel to the people around me or the people who come to consult, the people who wish to know more."-P5 "I am a link between the community and access provision also at the community projects through mobile clinics, you know. Those sessions will also help in linking the clinic with the community. If you could just create that link, so that quota requirements can also be met."-P6,* conquered with Anand, et al. (2017), who found that properly trained professionals play a role of bringing the communities closer to the oral health services.

4.3.2.3.3 Community empowerment

Communities were empowered through involvement when their issues were at stake. This shares similar sentiments with Fudge et al. (2008), on stakeholder involvement. The following quote expresses the suggestion: *"I learned that including the patient in their treatment plan works wonders. They feel like real stakeholders who are respected. -P19.*

4.3.2.3.4 Morally obliged to community service

The study participants seemed to have been inducted to commit to community service as a result of SL exposure, as expressed in "*SL had a huge impact, by raising our awareness of people, beyond a*

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toothache, beyond calculus; you know; it just raises your awareness to understanding people you know. Because it takes you back to the Batho-Pele Principles, that you always have to put the community first. So it has really impacted me as a health professional, to be more aware of my patients, individually, and not just looking at them as a way of probably getting money. In a private practice, scaling and polishing or whatever procedure I do, I keep it at the back of my mind that this is a person, comes from this community. I was also able to run small projects, as my small ***contribution to making a difference*** *in the community."*-P6.

4.3.2.3.5 Importance of SL in ploughing back

The participants interpreted their role and participation as a way of paying back to the communities from what they learned. These are demonstrated by the quotes *"SL helps one to reflect about issues and that leads one to want to* ***plough back to the community*** *in terms of helping out where necessary. I do not think that the dental school will lose anything by making SL the only teaching method. There will actually be more to gain."-P14*. The participants; therefore, found SL to be enabling them to give back to communities.

4.3.2.3.6 Cultural sensitivity

"The ***lessons*** *taken home was that it is how well the client's needs are comprehensively addressed, and being mindful of existing cultural groups, being open minded and insightful as one interacts with various communities out there. -P10.*

4.3.2.4 Holistic approach

The exposure to SL activities enhanced learning as the participants realised that academic knowledge is far from complete when not integrated with actual work-based experiences. The confirmations are: *"I check what is the person's background, what has been happening previously before they came today in the practice, you must actually see beyond what they present to you. At the dental school, we see patients, but not as compared to the patients that we normally see when we go for SL.* -P3. *"I learned the interpretation of people's life situations. It has more to do with how you see a person as a whole, how their livelihood influences their oral health status. I learnt that you don't just see a patient as Dental patient, you incorporate all of the other domains, other factors that contribute to the health of the patient and their habits and lifestyles."* -P4. Since lecturers provided the theoretical knowledge, SL was viewed and experienced as a supplement to a comprehensive level required of oral health professionals.

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4.3.3. Theme 3: Challenges

Despite all the good that participants reported about SL, there were also challenges such as inadequate planning at SMU School of Oral Health Sciences that rendered the program to appear less desirable. Some participants said that SL does not work in private practice because there they need to make profit, and did not put people first. Others said that their home situations were more poverty-stricken than what they saw at SL sites, so they did not learn much. Others complained that reflection essays were not fairly assessed. Others hated SL when it came to making empty promises to communities, which they never came back to deliver. The challenges are categorised into five (5) themes: private practice-related challenges, community-related challenges, SL curriculum challenges, quality of care challenges, and stakeholder/role player-related challenges. These are discussed below.

4.3.3.1 Private practice-related challenges

The participants expressed private practice related challenges, as constrained by financial limitations of poverty: *"We are poorly accessible to communities. Money is the determining factor; you can't go beyond what a patient is able to pay. We are controlled by the price. You are bound to reduce the level of patient treatment if they cannot afford. -P2. "But in private practice, it does not work for us. It's only dental work and some other patients are not comfortable talking about their private issues in the surgery. But then some patients do understand when you ask to help them with anything."-P19.*

4.3.3.2 Community-related challenges

The theme had subthemes such as: lack of knowledge in the community, rhetoric empty promises, communities do not prioritise oral health, and oral health system abuse communities.

4.3.3.2.1 Communities lack knowledge

The participants reported that the communities did not know about problems when they do not consult professionals for oral health: *"It is very difficult to get people to go to the doctors due to this belief that if you have a toothache you must take your tooth out, so they still do not know that there are options, such as have the tooth fixed, or replaced. It's a sequel of previous oppressions." - P1. But out on SL you ask them when last did you clean your teeth, they don't even know that they're supposed to clean their teeth."-P3. ". . . some communities are not aware of simple dental treatments. Some people think that public clinics are only providing basic medical care, but not dental care."-P17.*

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4.3.3.2.2 Empty promises to communities became a rhetoric

Previous SL groups had apparently given impressions that they would return, but did not: *"Past SL participants made promises that they would go back to give patients services which they never did. The previous year group had also done the same thing. This made me feel like a useless or rather helpless professional, as I could still not offer clients any help. The clients are still facing the same problems when we see them, even after we leave."* -P1. "*We make promises that the next time we come we will give them proper treatment and we do not deliver."-P2.*

4.3.3.2.3 Oral health not prioritised by communities

Some participants also seemed to believe that communities did not pay much attention to oral health: *". . . you get to realise that they don't value oral health as much simply because they have priorities that they value/put beforehand than oral health. They would rather put food on the table than pay their money to go visit a dentist." -P13.*

4.3.3.2.4 Communities were treated unfairly by the system

The participants found that communities were not treated fairly: "*People come from faraway places just to make an appointment. They come with that little money. From there they go back home to wait for two weeks. Meanwhile, they are in pain. This affects the SES of all communities. We do not have enough instruments at any rate. Worse of, other facilities do not have adequate staff coverage." -P20.*

4.3.3.3 SL curriculum organizational challenges

The subthemes are that the SL theory was ineffective, with unfair assessments, and that it was strenuous to place SL in final year, and that traditional methods restrained free learning.

4.3.3.3.1 Theory was ineffective and monotonous

The participants indicated that their study programme became lively when SL was added into their course, as the lectures were boring: *"Can I be honest with you? Instead of heaping us up with theory you could be releasing us because we learn more out there than your theory. A lot of it does not make sense anyway, and it is too abstract. But when you work, you learn with understanding." - P2. "I had a little bit of a problem in the way SL theory was presented. When we started I was lost. The SL theory was boring due to unclear learning objectives. We were crowded with a lot of theory without the*

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actual practice. I didn't know what we were doing."-P7. "Another boring thing is that throughout the final year, we were made to do SL articles a lot. "P19.

4.3.3.3.2 Reflections were unfairly assessed

The participants did not approve of the fairness in their assessment of SL: *"We were, like, forced to say: 'oh my word, this is such a bad thing'. The marking of the reflections also needed that emotive or affectionate part of us. If you are from the poorer environment than Salvokop, you were deemed incorrect. That was unfair." -P12. "When we wrote reflections; we didn't really know what to say because to us it was just normal to us." -P21.*

4.3.3.3.3 Final year was strenuous

The participants found the placing of SL at final year as improper, as it is overloaded: *"You as a student come back drained. You do not perform well."-P5. "For one, I find that final year is very strenuous to be quite honest, while service learning is very important as well."-P12. "We are not exposed much if we do SL in our final year. We cannot be trusted because we are not competent enough."-P10.*

4.3.3.3.4 Traditional approaches restricted our learning

SL was viewed as restricted by old methods: *"At the oral health clinic, the patients that we saw were first screened by doctors. They were specifically selected and we did not see all patients due to that factoring barrier. This made it hard to practice some of the procedures in the clinic."-P5.*

4.3.3.4 Quality of care challenges

This theme has subthemes of limited resources' impact on quality, lack of follow-up, and probable lowering of quality.

4.3.3.4.1 Limited resources impede quality of oral health services

The participants indicate that resources in communities are limited and is worse in rural areas: *"People have oral health problems and they do not know about it, especially, in the rural areas. But now, with limited resources, you can only wish you could assist." -P2. "There's no time to spend on one patient because we want to help everyone. This is caused by severe shortages of human resources. This impedes the quality of the service that we offer to patients."-P9. "And when you look at their SES you want to do more for the patient, but the lack of resources, especially, funds limit you. You*

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therefore have to modify your treatment plan and see what can work for that particular patient, what they can afford. Communities are now used to sub-standard treatments, due to resource constraints everywhere."- P13.

4.3.3.4.2 Lack of follow-up on patients

The participants explained that follow up was lacking on SL activities: *"I am also concerned about following patients up after treatment, as well as those that were referred to dentists. We were not even sure whether those dentists treated them or not." -P2. Some people don't get to be assisted. The next SL trip, you find another patient with his own new problems. Patients' problems are never truly solved completely due to lack of follow-up in the curriculum." -P3.*

4.3.3.4.3 Quality care could be compromised

Some participants claimed that in some communities, nurses were used in Oral Health: "*Many healthcare centres, are managed by nurses. Nurses are given a huge responsibility of managing oral health centres, and they do not know what we do there or implications of anything that we do. So they definitely end up neglecting what dental patients' needs are because it is beyond their scope of practice.*"-P20.

4.3.3.5 Stakeholder/role player-related challenges

The subthemes in this section are that there was inadequate political support for basic services affecting oral health provision and that students preferred to get away from a negative campus learning environment.

4.3.3.5.1 Politicians do not support provision of adequate basic services

The participants claimed to have advocated for basic service provision in communities: *"The communities do not have electricity, no matter what you're telling them. They need clean water because at most of the clinics they use water from the ground. That affects their oral health in a bad way. As a healthcare provider, I was so motivated to advocate for the community that I went to the councillor and the mayor, but it didn't yield any positive results. It was not easy for me to convince the politicians with money about healthcare services and the community needs. Their whole story was a long red tape which may be conquered after 100 years"-P4.*

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4.3.3.5.2 Negative aspects of learning environment on campus

Participants complained about the discriminatory treatment that they received from clinical supervisors which include verbal abuse: *"There are those who will actually walk with you, and there are those who will just drag you and actually crash your confidence. Especially those who shout at you in front of the patients, iyoooo…"-P5. "I had a bad experience at the dental school. When you're older, you are treated differently from other students. Other people make a fool of you, they treat you as if you are not normal. I was tortured at our clinic. As an older person in the class, it was really painful. Those people at Integrated Clinical Dentistry (ICD) treated me like trash as if I don't know what I am doing. Because I'm older, I had a feeling that I was being discriminated for my age. When you are older, you become more focused...but some individuals will find a way of delaying you."* -P7.

4.3.4. Theme 4: Strategies to Improve Outcomes

Due to the above departmental and community frustrations around SL, participants; therefore, made some recommendations for upgrading the SL curriculum. For example, they were of the opinion that the SL theory component might be reduced and replaced with community work. Many felt that SL needs to be expanded to local communities, to other departments and disciplines, as well as being introduced earlier in the academic programme. All 22 participants supported the SL approach, but expressed the following changes which would help improve the expected outcomes: "*The curriculum would need to be continuously evaluated and renewed*."-P14). "*Service Learning must continue all we need to do is improve upon it, to come out with new ideas for students, to make it more fun, but definitely we need it*."-P19.

4.3.4.1 Request for a longitudinal programme

4.3.4.1.1 Start SL earlier in the dental program to cover more communities

The respondents proposed that SL should be extended to more communities in and outside campus, to other students and from earlier years of study: "*I strongly believe that students should be made to serve campus communities*."-P1. *We need to learn and they need our expertise. If you guys provide enough security and food, SL students can make a big difference in the community in a positive way." P2.* "*If SL can be started earlier and not only in the final year groups. Also, all the communities need our SL and should get it*."-P9. *"I know we have the constraints of time and the availability of training time to factor that in, but if it can be started; maybe earlier on in the teaching program, one can go through the university training with different perspectives of healthcare."* P10. *"I think we should*

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not wait until the final year to start with SL. They will examine patients holistically, and not a class 2, class 3, class 4 points. Those reflective essays can be written at the time, taking them one day at a time. This will help avoid starting reflections in the final year, because for some people, it becomes e----extremely difficult to reflect."-P20. "Expand the SL programme to other people in other communities like my own community."-P22.

4.3.4.1.2 Increase treatment packages

The participants wanted SL offerings/packages to cover community oral health needs: "*If the SL that we did from the second year would increase treatment packages to screening, scaling and polishing and restorations, that would cover the community oral health needs.*" -P2.

4.3.4.2 Curriculum review

4.3.4.2.1 Include current socio-political issues in the SL curriculum

Some study participants viewed socio-political issues as being relevant for inclusion in the oral health curriculum: *Things that are happening generally like...maybe it can be more...interesting, if it's talking to current issues. Reality is interesting, we understand that South Africa is poverty stricken, almost 80% of the population is poverty stricken and if those things are not discussed anywhere in our curriculum theory, then it means we are hiding something isn't?*"*-P 7.*

4.3.4.2.2 Introduce the credit system

The participants recommended that SL should be allocated some credits so as to increase opportunities of SL for students: "*Those sessions will also help in linking the clinic with the community. If you could just create that link, so that quota requirements can also be met in the community through the mobile clinic.*" -P6

4.3.4.2.3 Introduce theory gradually together with the practical

The participants were in favour of SL being introduced at the time of theoretical lectures, and be linked directly with the various SL components in order to fortify learning. "*How about introducing theory gradually together with the practical?" P7.*

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4.3.4.2.4 Accommodate other learning styles in SL reflections

Insinuations to cover all students in SL were expressed, as suggestions to accommodate learning styles suitable for all students during SL reflections are signalled in *"The method in which we had to reflect was only umh, would only favour the individuals that are into writing as opposed to individuals who are into talking because we communicate differently. Method of reflection could not help some people to actually express what they felt. I feel like some reflections would have been appreciated on one -on -one sessions with our supervisors. I could have better expressed myself in talking than in writing." -P12.*

4.3.4.2.5 Introduce video clips during community engagements

The participants proposed video clips in order to capture the valuable moments as original as possible for richness of reflective discussions. They, therefore, pointed out that video clips will deliver undistorted messages from the community if taken during engagements: *"I think it would also be nicer if we were able to take videos, and do presentations where we play clips for people to understand, with the consent of the people, of course. It would be easier to capture the emotion in that moment because when you listen to something you reflect on it later, when you tell it to the next person it might not carry the same… tone and weight."*-P12 *"I feel like there is a broken telephone of some sort. When I tell you a story and then the next person, it does not carry the same weight as when you being there. Utilise available technology doc (laughter). All students own a telephone, so they can enjoy to view these clips whilst learning something from the people."*-P12.

4.3.4.2.6 Make SL more fun and fashionable

There was also a suggestion to make SL more attractive. This notion is manifest in *"SL must continue; all we need to do is improve upon it, to come out with new ideas for students, to make it more fun and interesting, but definitely we need it."*-P14. *"SL helped me, it was fun and nice. I learned a lot of things. It was not only about dental patients, but we had to see how else we can assist the patient."* -P19. *"I enjoyed the SL project, and it is stylish."*-P10 "*We will have fun and enjoy it."*-P14.

4.3.4.3 Improve infrastructure and equipment

Participants made a plea to the authorities to avail resources for oral healthcare; evident in the following *"Authorities must provide an extra mobile clinic with modern equipment and instruments, in order to increase treatment packages in the community."* P17.

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4.3.4.4 Introduce inter-professional working relationships among students

The participants seem to believe that SL would suit other study programmes on campus as well: *"SL should not be limited to community dentistry department, but should be introduced in other departments."*-P10. *"I think if the team could have other students from nursing services, medical students, dietetics, physiotherapy, to go out there as a team, so that when a person comes in, all their issues are addressed at once. If we were all working together as a health team, this would improve a lot and it would even help the people out there to stop thinking about Oral Health as pain inducers."* -P13.

4.3.4.5 Act on students' feedback

Participants emphasised the importance of acting on the feedback written on student reflective essays. *"Students' reflections form part of the feedback which would help in terms of improving SL. Be open in terms of whatever the students reflect about. Take action instead of just marking their scripts and giving them a mark. Mark their scripts and, thereafter, improve on suggestions that students are bringing up, and it would motivate them as they will see that they are not only reflecting on things and nothing happens. They will feel great as the stakeholders in the business of community care."* P14. This was supported by Kruger, et al., (2015) when they talked about giving the student a voice; students' perspectives.

4.3.4.6 Monitoring and evaluation of SL and treatments in the community

The participants proposed the monitoring and evaluation of SL treatments in communities: "*I am also concerned about following those people up after treatment, as well as those that referred to dentists. How would we know that we did a good job if we do not go back to them and ask? We were not even sure whether those dentists treated them or not.*"-P2. *"As professionals, we need to be true to our people. The other thing is evaluation of the treatment. You can go to the same area maybe twice after a while and check how the people that you were treating are doing.*" -P2.

4.4. SUMMARY OF THE THEMES AND CONNECTION WITH STUDY PURPOSE

The purpose of the study, as expressed by aim and objectives, were as follows: The aim was to explore the perceptions of oral health professionals regarding the impact of SL on their current practice. The four (4) objectives were:

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- O1: to determine the self-reported experiential practices of oral healthcare professionals that require the application of knowledge and skills acquired during SL training;
- O2: to evaluate the level of social responsiveness and personal growth among SMU oral healthcare graduates;
- O3: to determine the perceptions of oral health practitioners about SL enhancing their academic development during undergraduate training, and
- O4: to understand any challenges encountered by the practitioners in providing acceptable (i.e. adequate) healthcare services in the field of oral health practice.

In recapping the themes in a condensed form using a table and linking with the objectives of the study, the next table provided the requisite summary.

Table 3: Summary of themes, subthemes and connections with study objectives

Objectives	Themes	Subthemes
O1, O3	**Theme 1** Personal Qualities	Personal attributes
		Community as educator
		Enhanced professional skills
O1, O2, Q4	**Theme 2** Building Relationships	Student community c**ollaborations**
		Awareness of community needs
		Social accountability
		Holistic approach
O1, O4, Q5	**Theme 3** SL Challenges	Private practice-related challenges
		Community-related challenges
		SL Curriculum challenges
		Quality of care challenges
		Stakeholder/role player-related challenges
O1, O2, O3, O4, Q5	**Theme 4** Strategies to improve SL outcomes	Request for longitudinal SL programme
		Curriculum review
		Improve infrastructure and equipment
		Introduce inter-professional working relationships among students
		Act on student feedback
		Monitoring and evaluation of SL in the community

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The table above is a brief demonstration that the research purpose was addressed by showing how and where the study objectives have been attained in the study.

4.5 CONCLUSION

The working together in SL showed to have created relationships, which resulted in strong partnerships and teamwork, as well as reciprocal learning (students learning from one another and from community members, and communities learning from students' academic expertise). As students practice, they could easily learn things together as colleagues and this made them understand one another's professional roles and appreciate diversity. As they executed their professional roles, they got an opportunity to be aware of each other's learning traits and talents. This enhanced professionalism amongst them, which augmented quality patient care and improved practice standards. As they refined their practice, they started to identify challenges in communities as well as in the training. They learned to look for solutions, that is why they could make recommendations. Their involvement in SL, debriefing sessions after each daily community encounter as well as reflections, all contributed to the effectiveness of SL in their profession and personal growth. As their learning deepened, they could compare the traditional methods of training to SL, which enhanced their attitudes of citizenry (social accountability and responsiveness to community needs).

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CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.1. INTRODUCTION

This study aimed to understand the experiences and perceptions of oral health practitioners in service learning (SL) programmes undertaken in their final year of study prior to assuming actual service after graduation. In essence it was an evaluation of the value/worth of SL, whether it made a significant contribution in their training to become health professionals, and if so, to what extent. Since it became clear from previous studies that SL was beneficial, this study then continued to determine if SL was organized in the best possible way, which the study indicated was not the case and that SL could improve significantly. In fact, optimal SL was found to be requiring a thorough transformation. While the previous chapter presented the analysis of qualitative data in addressing the study objectives, this concluding chapter refines the study findings in relation to the research questions (on page 4 of Chapter 1) and foregrounds the learning from SL experiences of the participants.

5.2. CONCLUSIONS OF THE STUDY

The study established that SL is a useful approach to the teaching and learning of technical and academic content in oral health education. SL is found to be meeting the learning objectives/outcomes of the BDS, BDent Ther and BOH student groups satisfactorily. Every participant had a success story to tell regarding SL and held positive views of their professional benefit from their SL experiences. They also would recommend that SL pedagogy be extended in terms of time and the communities they served. Participants also called for SL to be introduced in earlier years of study. The study participants also pointed out some weaknesses of SL. The weaknesses, as highlighted earlier, include the short SL duration and its limited coverage to communities. Despite these flaws, they greeted SL as a useful learning component that adds comprehensiveness to the entire oral health training.

The ***first objective*** of this study was to determine the self-reported experiential practices of oral healthcare professionals in their opinion that, require the application of knowledge and skills acquired during SL training. This study:

Demonstrates that the participants had found SL to be beneficial in their professional development and practices**.** For example, autonomous decision-making, collaborative learning, and a sense of achievement. The self-reported experiential practices are presented as the themes developed in Chapter 4.

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The ***second objective*** of this study was to evaluate the level of social responsiveness and personal growth of SMU oral healthcare graduates.

The participants indicated that they appreciated the members of communities and exhibited increased compassion. They also indicated that they went beyond oral health treatment in some cases, especially, after knowing the problems and challenges that the communities and the families were experiencing and had to endure. There were still few practitioners who did not fully embrace or appreciate providing full service when money from clients was limited, and thus provided a service that suited the amount of money paid.

The ***third objective*** of this study was to determine the perceptions of oral health practitioners about SL enhancing their academic development during undergraduate training.

The participants indicated that the academic side of their training was reinforced by SL practice in the community. However, the downside of SL theory was lack of proper and efficient delivery. They also said that SL was convenient in bringing the practical perspective, which made them to understand the oral practice requirements of their qualifications.

The ***fourth objective*** of this study was to understand any challenges encountered by the practitioners in providing acceptable (i.e. adequate) healthcare services in the field of oral health practice.

The challenges in the communities and the real work situation were not reflected anywhere in the academic learning of oral health, but SL was said to have provided that components to an inclusive extent.

Furthermore, the SL as offered, beneficial as it was indicated, had limitations of timing and duration, as well as limited coverage to communities.

The recommendations below were derived from the participants' sentiments which were in line with the study objectives.

5.3. SUMMARY OF RESEARCH FINDINGS

The summary is organised according to the research questions that appeared in Chapter 1, which the next section restates for ease of reference.

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5.3.1 Research Question 1

What are the perceptions of oral health professionals regarding the impact of SL on their practice?

The participants assert that **SL had a positive influence on their personal development as well as in their career practice** as oral professionals. They view SL as a mechanism for self-reflection, through which attributes such as humility were developed a humble character is built. Their new character traits empowered them to view communities with compassion and sensitivity to different cultures. They learned from these communities and found SL to be enhancing Oral Health education for a holistic perspective on their career, integrating the technical/academic skills with the soft skills that are needed when actual practice takes place. They also experienced SL as pleasurable in learning. The exposure to communities, learning to handle oral health patients according to their needs and problems beyond the oral health related ones seem to have enabled and assisted the professionals to approach the treatment in a more caring way as a result of exposure to SL.

The participants also indicated that exposure to SL provided a pragmatic **working experience opportunity**, which is the work-integrated learning. They experienced a handy guide of realistic work experiences.

However, despite the value of SL, introducing SL in the final year was considered to limit the opportunity that the oral health students could have regarding actual application of the theory learned. This was an indication of the sub-optimality of SL as offered in SMU's Oral Health programmes.

5.3.2 Research Question 2

In what ways, have SMU oral healthcare graduates developed social responsiveness and personal growth by being exposed to SL during their undergraduate training?

The study participants learned to engage with communities in various living environments and oral health patients in particular. The connection between the theory learned in lectures and the actual work situation was becoming clearer as the SL progressed. The fact that SL was for only eight (8) weeks and only in the final year was viewed as 'too short' for a beneficial programme.

While the main training of the health professionals was in oral health, SL extends to enabling relationships between professionals and communities. It also creates a platform for the experts to empower community members. The study showed that the connection, trust and confidence of the professionals enable the use of SL to enlighten the community members about oral health treatment

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and clear some myths of communities. The trust was also viewed as enhancing the relationships with people where good rapport would exist between oral practitioners and their clients and communities. They felt morally obliged to assist communities.

The participants also perceived SL to have contributed towards building relationships with colleagues. They reported being able to manage difficult patients (those who are scared of the treatment), as well as the children who come for treatment (page 29, section 4.3.1.3.5).

The SL exposure also enabled the oral health professionals to gain people's trust by giving best services and encouraging return services and word-of-mouth referrals. The SL trained practitioners, together with the patients, appreciated service provision. The participants prioritised client-satisfaction in their treatment and learnt to provide quality healthcare services to patients.

5.3.3 Research Question 3

How did SL experiences of undergraduate students influence learning of theoretical content?

The SL trained oral professionals were excited about the services they gave. SL was a connection linking theory with practice as those trained managed actual work, understood people more, and gained the desire to assist oral health patients.

5.3.4 Research Question 4

What challenges do oral health practitioners encounter with SL in relation to providing acceptable healthcare services?

The challenges related to SL were indicated as: limited training time, limited coverage of communities, inadequate supervision, price limitations (in some instances), poor timing of SL and unfulfilled promises. The participants complained that the duration of SL is very short and denies them adequate exposure because it ends when they start realising the actualities of oral health practice, blocks actual treatment of patients, and prevents perfection as it ends before leading to mastery. The communities visited during SL training are the same every year and are few. This means that exposure does not expose the various groups engaged in SL to all the possible varieties of conditions. Study participants compared this supervision to facilitation at SL project sites, where they were placed in the actual work environment, made decisions independently, and gained confidence in holistic patient management. Some SL trained oral health practitioners in private practice

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confessed to providing service only to the level that suited the price paid (though only a few occasions). It is a weakness if treatment is limited by available funding than patient's needs.

5.4. PRACTICAL IMPLICATIONS OF THIS STUDY

The research findings are quite crucial in improving the SL delivery model. The participants were convinced that SL eases learning and understanding of theoretical concepts, and that it provides fun in the learning process. Oral health practitioners can reflect on the SL intentions and adapt their attitudes and practice. On the other hand, curriculum experts in the relevant departments can also incorporate the suggested proposals in order to improve the SL model in SMU.

This study views SL as an opportunity to contribute positively to the attitudes and practices of oral health professionals in order to improve access of care for the poor. Albeit the true impact of the placement will only be realized after qualifying as Oral Health professionals. This conditioned the participants to know that they can manage some of the conditions of work while there may be others that cannot be in their scope. As a result, they should learn to work under all those conditions.

This study was practical in the sense that it has managed to investigate perceptions existing regarding the SL training, identified particular problems that can be addressed, and make recommendations for effective practices in the form of recommendations. The problems adjusted can be addressed in different timeframes such as short-term and long-term. Short-term solutions could be carried out by sending students in the oral health to the sites for observations while ensuring that arrangements are made for future curriculum to integrate SL from earlier years.

5.5. RECOMMENDATIONS

The following recommendations are made in line with the current study:

5.5.1. Research Recommendations

The SMU Oral Health curriculum designers should:

- redesign the SL curriculum by clearing it of weaknesses mentioned as a way of revitalizing it;
- adjust the duration and community coverage of SL as feasible from inputs of the reports developed by SL study participants;
- enable more SL interaction with communities and more community coverage;
- integrate the social responsiveness content in SL for future SL participants;

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- redesign the SL to start earlier before the students reach their final year of study, and
- carefully examine the students` feedback/reflections and utilize it to improve the course pedagogy.

5.5.2. Recommendations for Further Study

The study recommends that:

- the strengths of SL offered at SMU should be researched qualitatively in a separate study;
- there should be benchmarking research undertaken from leading higher education institutions;
- comparative in-depth studies should be undertaken to determine the areas, which are not adding value to the current SL in SMU in order to ensure that they are removed before any incorporation into the revised curriculum, and
- SMU should involve community partners in the continual evaluation of the pedagogy as a mission to improve the SL program and the educational experience for the students.

5.6 CONCLUDING REMARK

In this study, it was found that SL is worthwhile and has the capacity to improve oral health practitioners by exposing them to the real workplace environment. The students had never figured out what the actual setting would be like, and had preconceived ideas and imaginations. Yet another benefit derived from exercise is the heightened sense of the socio-economic standings of the community members, particularly poor communities which needed some special treatment. SL exposed them to certain realities such as the inability of some patients to make repeated visits if not attended to, the first time.

A sensitivity to the students' social responsiveness was evident when the poverty of the patients was explicit. There were instances when SL students realized that they would need to work extra hours to avoid having to turn patients away for another day when they might not afford transport for return trips. On the second question above, the SL students were able to understand that certain complications, such as when a tooth hides behind the patient`s sinus, may occur. In light of this, it can be concluded that SL is pivotal to initiation of oral health students into a life of autonomy and re-integration into society where they can contribute to its health.

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APPENDICES

APPENDIX A: INSTITUTIONAL PERMISSION

UNIVERSITEIT
STELLENBOSCH
UNIVERSITY

Health Research Ethics Committee (HREC)

Approval Notice

New Application

03/09/2018

Project ID :7054

HREC Reference # S18/05/102

Title: Impact of service learning on oral health professional practice.

Dear Dr Motlalepula Phalwane

The New Application received on 15/08/2018 15:11 was reviewed by members of **Health Research Ethics Committee** via **expedited** review procedures on 03/09/2018 and was approved.

Please note the following information about your approved research protocol:

Protocol Approval Period: **This project has approval for 12 months from the date of this letter.**

Please remember to use your project ID (7054) on any documents or correspondence with the HREC concerning your research protocol.

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

After Ethical Review

Translation of the informed consent document(s) to the language(s) applicable to your study participants should now be submitted to the HREC.

Please note you can submit your progress report through the online ethics application process, available at: Links Application Form Direct Link and the application should be submitted to the HREC before the year has expired. Please see *Forms and Instructions* on our HREC website (www.sun.ac.za/healthresearchethics) for guidance on how to submit a progress report.

The HREC 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.

Provincial and City of Cape Town Approval

Please note that for research at a primary or secondary healthcare facility, permission must still be obtained from the relevant authorities (Western Cape Department of Health and/or City Health) to conduct the research as stated in the protocol. Please consult the Western Cape Government website for access to the online Health Research Approval Process, see: https://www.westerncape.gov.za/general-publication/health-research-approval-process. Research that will be conducted at any tertiary academic institution requires approval from the relevant hospital manager. Ethics approval is required BEFORE approval can be obtained from these health authorities.

We wish you the best as you conduct your research.

For standard HREC forms and instructions, please visit: Forms and Instructions on our HREC website https://applyethics.sun.ac.za/ProjectView/Index/7054

If you have any questions or need further assistance, please contact the HREC office at 021 938 9677.

Yours sincerely,

Miss Elvira Rohland
Health Research Ethics Committee 1

National Health Research Ethics Council (NHREC) Registration Number:

REC-130406-012 (HREC1)•REC-230208-010 (HREC2)

Federal Wide Assurance Number: 00001372
Office of Human Research Protections (OHRP) Institutional Review Board (IRB) Number:
IRB0006240 (HREC1)•IRB0006239 (HREC2)

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APPENDIX B: REQUEST LETTER TO FACILITY MANAGER

Permission to collect data on the healthcare facility staff members at the dental unit.

I, Motlalepula Grace Phalwane, a student at the Stellenbosch University, from the department of Health Professions Education, kindly request permission to interview the staff members in your facility as a research requirement for an MPhil degree. Potential participants in the study would be oral health professionals who completed their Bachelor of Dentistry, Bachelor of Dental Therapy and Bachelor of Oral Hygiene degree programs at Sefako Makgatho Health Sciences University between the years 2015 and 2017.

Data will be generated at face-to-face interviews with these professionals using a researcher-administered interview guide. Questions will revolve around how Service Learning impacted their learning, professional development, personal lives as well as social responsibility. It is hoped that the findings of this study will assist in curriculum evaluation and development, as well as improving on the subsequent clinical practice of oral health personnel.

Student: M. G. Phalwane

_____

Signature:

_____

Date:

Permission granted by:

Facility management

_____

Signature:

_____

Date:

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APPENDIX C: LETTER TO PARTICIPANTS

PARTICIPANT INFORMATION LEAFLET AND CONSENT FORM

TITLE OF THE RESEARCH PROJECT: An assessment of the impact of service learning on the practice of newly qualified oral healthcare practitioners.

REFERENCE NUMBER: Project ID: 7054 HREC Reference # S18/05/102

Principal investigator: M. G. Phalwane

ADDRESS:

Sefako Makgatho health Sciences University

School of Oral Health Sciences building

Department of Community Dentistry

Office # N359

Tel # 0125214862/ 4848

Cell # 0827362737

Supervisor: Dr LS McNamee

Centre for Health Professions Education

Faculty of Medicine and Health Sciences

P O Box 241, Cape Town, 8000, RSA

Email: mcnameel@sun.ac.za,

Website: www.sun.ac.za/chpe.

CONTACT NUMBER: 27 21 938 9495

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You are being invited to take part in a research project. Please take some time to read the information presented here, which will explain the details of this project. Please ask the researcher any questions about any part of this project that you do not fully understand. It is very important that you are fully satisfied that you clearly understand what this research entails and how you could be involved. Also, your participation is entirely voluntary and you are free to decline to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part.

This study has been approved by the Health Research Ethics Committee at Stellenbosch University and will be conducted according to the ethical guidelines and principles of the international Declaration of Helsinki, South African Guidelines for Good Clinical Practice and the Medical Research Council (MRC) Ethical Guidelines for Research.

What is this research study all about?

The study will be conducted at the healthcare facilities where study participants are working; twenty participants altogether will be recruited.

This project aims to find out what your views are about the application of SL in practice. Depending on the outcome, appropriate recommendations will be made regarding the pedagogy at the school.

Informed consent will be signed and interviews conducted for less than an hour.

Why have you been invited to participate?

We are looking for information about how SL is affecting your practice.

What will your responsibilities be?

To complete this informed consent to allow us to interview you.

To answer our four questions regarding how SL has affected how you

Will you benefit from taking part in this research?

There are no personal benefits for the participants, but instead, future students are likely to benefit from this research.

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Are there in risks involved in your taking part in this research?

There are no risks identified; except the fact that we are going to take thirty-minutes of your work.

If you do not agree to take part, what alternatives do you have?

You are free to decline participation in this study, and that is not in any way going to attract victimisation or denial of any form.

Who will have access to your medical records?

The information collected will be treated as confidential and protected. If it is used in a publication or thesis, your identity will remain anonymous. Only the scientific research community will have access to the information.

What will happen in the unlikely event of some form injury occurring as a direct result of your taking part in this research study?

This research is not likely to cause any harm to participants, there is no insurance applicable for this study.

Will you be paid to take part in this study and are there any costs involved?

No, you will not be paid to take part in the study but your transport and meal costs will be covered for each study visit. There will be no costs involved for you, if you do take part.

Is there anything else that you should know or do?

You should inform your family practitioner or usual doctor that you are taking part in a research study. You should also inform your medical insurance company that you are participating in a research study.

You can contact M. G. Phalwane at SMU, Tel 0827362737…… if you have any further queries or encounter any problems.

You can contact the Health Research Ethics Committee at 021-938 9207 if you have any concerns or complaints that have not been adequately addressed by your study doctor.

You will receive a copy of this information and consent form for your own records.

Declaration by participant

By signing below, I ……..……. agree to take part in a research study entitled: “perceptions of newly-qualified oral healthcare professionals about their exposure to service learning in their final year of training at the Sefako Makgatho Health Sciences University, South Africa.”

I declare that:

I have read or had read to me this information and consent form and it is written in a language with which I am fluent and comfortable.

I have had a chance to ask questions and all my questions have been adequately answered.

I understand that taking part in this study is voluntary and I have not been pressurised to take part.

I may choose to leave the study at any time and will not be penalised or prejudiced in any way.

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I may be asked to leave the study before it has finished, if the study doctor or researcher feels it is in my best interests, or if I do not follow the study plan, as agreed to.

Signed at (place) .....…..…….. on (date) ……...…….. 2018.

....

Signature of participant **Signature of witness**

Declaration by investigator

I, Motlalepula Grace Phalwane……..…… declare that:

I explained the information in this document to ……..

I encouraged him/her to ask questions and took adequate time to answer them.

I am satisfied that he/she adequately understands all aspects of the research, as discussed above

I did/did not use an interpreter. (If an interpreter is used then the interpreter must sign the declaration below.

Signed at (place) .....…..…….. on (date) ……...…….. 2018.

....

Signature of investigator **Signature of witness**

Declaration by interpreter

I *(name)* ……..…… declare that:

- I assisted the investigator (*name*) ……. to explain the information in this document to (*name of participant*) ……..…….. using the language medium of English.
- We encouraged him/her to ask questions and took adequate time to answer them.

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- I conveyed a factually correct version of what was related to me.
- I am satisfied that the participant fully understands the content of this informed consent document and has had all his/her question satisfactorily answered.

Signed at (*place*) .....…..……. on (*date*) ……...……..

....

Signature of interpreter **Signature of witness**

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APPENDIX D: DATA GENERATION INSTRUMENT

Interview guide questions adopted from Ann Harris Shiarella and Anne M. McCarthy Colorado State University Mary l. Tucker Ohio University and Boysen et al., (2016). Please respond to the following questions as sincerely as possible.

Date: _____ **Questionnaire number:** _____

D1: Demographic Questionnaire

Questionnaire Part 1: Socio-demographic Factors and Measure of Attitudes and Perceptions of Dental Health Practitioners on Impact of Service Learning.

Please choose a category which best describes yourself

1. Which category below includes your age?

1	20 years and below	2	21-25 years
3	26-30 years	4	31-35 years
5	36-40 years	6	40 years and above

2. Which category below includes your gender?

1	Male	2	Female

3. Which category below includes your race?

1	African/ Black	2	Indian
3	Coloured	4	White

4. Your previous post-matric qualification before BDS

1	Post-matric diploma(s) or certificate(s)	2	Baccalaureate Degree(s)
3	No post-matric qualification		

5. How would you describe the area in which you are residing?

1	Urban	2	Rural

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6. Choose the Dental degree that you pursued

1	Oral Hygiene	2	Dental Therapy
3	Dental Sciences		

7. Where is your professional practice based?

1	Urban	2	Rural

8. Would you prefer to work for a public or a private employer?

1	Public employer	2	Private employer
3	Self-employed	4	Other (specify:_____

9. Would you like to practice in the urban or rural area and why?

1	Urban	2	Rural

10. Do you have previous community service experience?

1	Yes	2	No

11. How often did you perform community service in the past?

1	Once per year	2	2-4 times per year
3	Monthly	4	Weekly
5	Not applicable		

D2: Interview Guide

Questionnaire Part 2: Assessment of the Impact of Service Learning on Study Participants.

Please answer the following questions to the best of your ability. Feel free to elaborate with examples of what you experienced.

2.1 How did the SL programme you experienced as an undergraduate student influence your current practice?

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2.2 Tell me about your experiences as a student before, during and after (the placement) at the SL projects.

2.3 In your opinion, how has service learning impacted your practice as a dental health provider?

2.4 How do you see yourself in your neighbourhood as a dental health provider?

2.5 Do you have any comments/ suggestions regarding SL in general**?**

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APPENDIX E: DESCRIPTION OF PARTICIPANT SOCIO-DEMOGRAPHIC INFORMATION WITH RELATED ACRONYMS

Age in years 21-25: 9 26-30: 8 31-35: 2 36-39: 0 40+: 3	Gender Male (M): 7 Female (F): 15	Race African (A): 20 Indian (I): 0 Coloured ©: 1 White (W): 1	Post-Matric Qualification (PMQ) Diploma/ Certificate (D/C): 11 Bachelor's degree (B): 6 No PQM (No PMQ): 5
Dental Degree Pursued BOH: 9 BDT: 5 BDS: 8	Residence (Res) Urban (U): 17 Rural ®: 5	Practice Locality (PL) Urban (U): 18 Rural ®: 4	Practice Residence Preference (PRP) Urban (U): 11 Rural ®: 11
Year of completion (YC) 2015: 6 2016: 8 2017: 8	Employment Preference (EPref) Public (P): 11 Private (Pr): 5 Self-employ (SE): 6	Community Service Frequency (CSF) Once per year (O): 1 2-4 times per year (2-4): 2 Monthly (mon): 4 No applicable (N/A): 15	Previous Community Service (Comm Serv) Yes (Y): 7 No (N): 15

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APPENDIX F: SPSS OUTPUT

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	9	40.9	40.9	40.9
	3	8	36.4	36.4	77.3
	4	2	9.1	9.1	86.4
	6	3	13.6	13.6	100.0
	Total	22	100.0	100.0	

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	7	31.8	31.8	31.8
	2	15	68.2	68.2	100.0
	Total	22	100.0	100.0	

Race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	20	90.9	90.9	90.9
	3	1	4.5	4.5	95.5
	4	1	4.5	4.5	100.0
	Total	22	100.0	100.0	

PMQ

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	11	50.0	50.0	50.0
	2	6	27.3	27.3	77.3
	3	5	22.7	22.7	100.0
	Total	22	100.0	100.0	

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Res

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	17	77.3	77.3	77.3
	2	5	22.7	22.7	100.0
	Total	22	100.0	100.0	

Strat

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	10	45.5	45.5	45.5
	2	4	18.2	18.2	63.6
	3	8	36.4	36.4	100.0
	Total	22	100.0	100.0	

Prac Locality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	18	81.8	81.8	81.8
	2	4	18.2	18.2	100.0
	Total	22	100.0	100.0	

Employment Preference

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	10	45.5	47.6	47.6
	2	5	22.7	23.8	71.4
	3	6	27.3	28.6	100.0
	Total	21	95.5	100.0	
Missing	System	1	4.5		
Total		22	100.0		

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Prac Res pref

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	11	50.0	50.0	50.0
	2	11	50.0	50.0	100.0
	Total	22	100.0	100.0	

Year

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	6	27.3	27.3	27.3
	2	8	36.4	36.4	63.6
	3	8	36.4	36.4	100.0
	Total	22	100.0	100.0	

Comm Serv

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	15	68.2	68.2	68.2
	2	7	31.8	31.8	100.0
	Total	22	100.0	100.0	

CSF

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	4.5	4.5	4.5
	3	4	18.2	18.2	22.7
	4	9	40.9	40.9	63.6
	5	7	31.8	31.8	95.5
	6	1	4.5	4.5	100.0
	Total	22	100.0	100.0	

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APPENDIX G: RUBRIC FOR ASSESMENT OF THE REFLECTIVE ESSAYS

1. Structure and Formatting	Scoring (1 to 5)
Are steps of the reflection model included in the report?	
Is it clearly written (free from spelling mistakes and grammatical errors)	
Is the reflection of appropriate length and sufficient detail	
2. Experience: What?	
What was your Purpose there	
Does this section objectively describe the activity? (event as has occurred)	
3. Feelings (Emotions and Prejudice, Assumptions etc.): How and Why?	
Does this section succinctly describe and give account of subjective feeling and stereotypes	
How did the feelings evoked affect one's actions related to the event?	
4. Now What?	
Does this section explain how the student will think or act in the future as a result of this experience?	
5. Development: Personal ,Professional, Civic	
Does the reflection clearly explain which category this experience fits into and how it affected student's development and growth (skills etc.) in the chosen category	
6. Futuristic View: So What?	
Does this section explain what the student learned	