Factors influencing utilization of Oral Health Services in Lesotho

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Final Mini-thesis

List of abbreviations

MOH	Ministry of Health
TCA	Thematic Coding Analysis
FGD	Focus Group Discussion
UWC	University of Western Cape
WHO	World Health Organization
CHAL	Christian Health Association of Lesotho
BOS	Bureau of Statistics
QEII	Queen Elizabeth II
LMIC	Low and Middle Income Countries
FDI	Federation Dentaire Internationale
NCD	Non Communicable Diseases
ANG	Acute Necrotising Gingivitis
HIV/AIDS	Human Immunodeficiency Virus /Acquired Immune Deficiency Syndrome
NGO	Non-Governmental Organization
IEC	Information Education Communication
MCA	Millennium Challenge Account

Contents

Keywords

Health system barriers

Individual level barriers

Knowledge on oral health services

Lesotho

Maseru

Oral diseases

Oral health

Oral Health Programme

Socioeconomic barriers

Utilization of oral health services

Declaration

I declare that the study "Factors influencing utilization of Oral Health Services in Lesotho" is my own work and that to the best of my knowledge it has not been submitted before for any degree, examination or other research purposes in any other institution. I further declare that all the sources I have used or quoted have been indicated and acknowledged as citations and complete references.

Full name: Navoneiwa Linjewile-Marealle

Signed: 

Date: 2nd October 2017

Dedication

This work is dedicated to my late father Mr Remigus Linjewile and my mother Mrs Suzan Linjewile, for raising me up to value education and gaining knowledge. To my husband Dr Simon Gaspar Marealle and our two sons Bernard Marealle and Ryan Marealle, for their constant love and support.

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Abstract

Background:

The oral health programme in Lesotho aims to offer curative, preventive, promotive and rehabilitative oral health services. However, observations as well as annual reports suggest that oral health service utilization is poor, as most patients only attend dental clinics with advanced stages of decayed teeth which can only be extracted. The reasons for this very undesirable late utilization of oral health services have not been systematically explored and understood in Lesotho. This makes it difficult for health planners to find solutions for improving access, utilizations and responsiveness of oral health services.

Aim: To better understand the factors influencing oral health services utilization in Lesotho. **Study design:** Descriptive, exploratory study design using qualitative research methods.

Study population: Adult patients who attend the Dental clinic in Maseru district public hospital (Queen Elizabeth II) made up the primary study population; and oral health service provider and health centre nurses, in this case the oral health personnel working in the district public hospitals and health centre nurses, took part as key informants.

Data collection: One to one semi-structured in-depth interview of the primary study population and Focus Group Discussion (FGD) for the key informants. Audio recording was used in both methods.

Data analysis: Data collected was analyzed using Thematic Analysis method.

Ethics statement: Participation in the study was voluntary; research was conducted in the language that people understand; a letter was given to explain research purpose and process, risks and benefits, requesting participation and ensuring confidentiality and anonymity; approval to conduct the study was obtained from University of the Western Cape (UWC) Ethics Committees, Lesotho Ministry of Health research and ethics Committee, Medical Superintendent of Queen Elizabeth II hospital and District Health Manager in charge of health centres.

Results: The result showed that patients had good general knowledge on the causes and prevention of common oral disease like dental caries and gum diseases but lack knowledge for prevention of dental caries by avoiding eating sugary foods and regular dental. Identified barriers to utilization of oral health services in the country included individual factors like fear and anxiety to injection and dental procedures, lack of perceived need for oral health services unless there is pain and knowledge of oral health in general and of the services provided. Health system

factors included lack of finances to cater for user fees and transport, long waiting time due to high workload and lack of oral health services in health centres, personnel attitude and ineffective communication and far dates of appointment, lack of equipment, instruments and consumables. Cultural factors like the use of traditional medicine and home remedies were also identified. Under socio-economic factors, although there was difference in levels of income, education and occupation among patients, this did not reveal any obvious barrier to utilization of oral health services.

Conclusion: The most common barriers to utilization of oral health services in the country were perceived need, fear and anxiety, long waiting time due to high workload and lack of oral health services in health centres.

CHAPTER 1: INTRODUCTION

Oral health is defined as a state of being free from mouth and facial pain, oral and throat cancer, oral, birth defects such as cleft lip and palate, periodontal (gum) disease, tooth decay and tooth sores loss, and other diseases and disorders that affect the oral cavity (WHO, 2010).

Oral diseases are a big public health problem in both developed and developing countries, with the most common oral diseases being dental caries and periodontal (gum) diseases. These two diseases have historically been considered the most important global oral health burdens. At present, the distribution and severity of oral diseases vary among different parts of the world and within the same country or region (Petersen et al, 2005). Tooth decay (dental caries) is the most widespread chronic oral disease worldwide and constitutes a major global public health challenge. It is the most common oral childhood disease, but it affects people of all ages throughout their lifetime. Periodontal (gum) disease begins as gingivitis (chronic inflammation of the gums), which is very widespread and for the majority of patients completely reversible The disease represents a major global oral disease burden with significant social, economic and health-system impacts (FDI, 2015) Symptoms of gum disease are highly prevalent among adults in all regions, while severe periodontitis affects 5% to 20% of most adult population (Petersen, 2009).

Despite the widespread nature of tooth decay (dental caries), reliable, standardized global data are limited. This is largely because oral health data are often not integrated in national disease surveillance, particularly in low- and middle-income countries and separate national oral health surveys are complex and costly to conduct, and hence not prioritized (FDI, 2015). There is no baseline data on oral diseases in all age groups in Lesotho except for the study carried out in 2010 countrywide on all children aged 12 years attending the selected schools from ten districts (MOH, 2012). The 'mean DMFT' (Decayed Missing and Filled Teeth) was found to be approximately 0.4 which falls within the 0.0 – 1.1 WHO classification range which indicates a very Low DMFT (MOH, 2012)**.** The Decayed (D) component of the DMFT contributes the most 97.20% to the caries index among the 12 year olds as compared to the missing teeth (M) component which contributed 0.28% and filled (F) component 0.00% (MOH, 2012). This shows

high levels of untreated caries in the community which could be due to lack of knowledge of parents on oral health issues or services provided in the hospitals, shortage of oral health services and personnel, financial and other factors which affect utilization of oral health services. Comprehensive data on oral diseases and management in all ages can only be found in Ministry of Health annual oral health reports, which shows that most patients attending dental clinic country-wide present with the problem of dental caries (MOH, 2009-2014). These annual joint reviews of Ministry of Health (MOH) reports, shows the diagnoses and procedures carried out in dental clinics countrywide throughout the year (MOH, 2009-2014).. From the year 2009 to 2014 these reports have shown that the most common oral disease presented in dental clinics countrywide is dental caries, ranging from 77% to 85% of all oral diseases attended in the clinic and that extraction is done to about 67% to 73% of these cases (MOH, 2009/10, 2010/11, 2011/12, 2012/13, 2013/14).

From my own experience of working in the dental clinic for more than ten years, most of these patients only present at the clinic when there is severe pain and the disease is at an advanced stage, so that no other treatment can be provided except extraction for pain relief purposes. This shows that oral health services offered in Lesotho are mostly curative in nature, with only a small proportion of rehabilitative, preventive and promotive services. While there is a lot of anecdotal evidence, the reasons for this late attendance to the clinic have not been explored systematically and thus are the purpose of this study.

Oral health service refers to the services that are provided by appropriately trained oral health personnel with the aim of either relieving symptoms, restoring function or preventing dental illnesses from occurring (MOH, 2012). These services include curative (restorative, oral surgery), preventive (screening, oral health education), promotive (oral health school programs), rehabilitative (orthodontics and prosthodontics) care. In Lesotho oral health services are provided only in the referral and district hospitals. There is no oral health service provided in the health centres, which serve rural areas where the majority of the population reside, except for outreach services on a monthly basis (MOH, 2012). Furthermore, there is a user fee charged for oral health services rendered at referral, regional and district levels, while general health services at health centre levels are free.

The lack of oral health services in health centres is due to a shortage of oral health personnel. Lesotho has a total of 26 Dentists both in public (18) and private practice (8) which make the Dentist to population ratio of approximately 1: 69230. This is higher than the average for Africa, which stands at approximately 1:150000, but lower than the 1:2000 ratio in most industrialized countries (WHO, 2015). There are only 10 Dental Therapists, 2 Oral Hygienists and 31 Dental Assistants, of which 28 Dental Assistants were trained on the job (MOH, 2012). Beyond these country averages there are high variations across Africa and also very big in-country difference, particularly between urban and rural areas (WHO, 2015). Importantly, all dental personnel in Lesotho are located in the urban area.

1.1 Study setting

Lesotho is a landlocked country entirely surrounded by the Republic of South Africa with an area of about 30555 square kilometers Two thirds of the total square area is mountainous (Bureau of Statistics, 2014). Country's terrain poses a transport problem as there are places inaccessible by road. The country has an estimated population of 1.8 million inhabitants with 83% of this population living in rural areas. Lesotho is divided into ten administrative districts, Maseru being the capital city with population of 431,998 people (Bureau of Statistics, 2014). The districts differ in terms of size, topography, climate and stage of development. The health care system in Lesotho operates at four levels: national, regional, district and health centre. The country has one referral hospital, 18 district hospitals and 128 health centres run by either government, Christian Health Association of Lesotho (CHAL), private sector, or the Lesotho Red Cross (Takondwa et al, 2010). Due to accessibility problem there is Lesotho Flying Doctors Service, which provides services to remote areas inaccessible by road.

Maseru district has two hospitals (one referral and one district hospital) and three filter clinics which provide oral health service. Out of 29 private health facilities and 44 private surgeries only seven are dental clinics providing oral health service. All these health facilities are located at the center of Maseru town and so they serve the urban part. It also have about 32 health centres (20 in the urban and 12 in the rural area) and all these health centres are not providing oral health services (MOH Oral Health Policy draft, 2015).

This study was located at the Maseru district hospital (Queen Elizabeth II Hospital), which provides the first level of service for dental care, which serves people from different areas of Maseru. The QEII hospital has a dental department with two dental surgeries staffed by two Dental Surgeons, one Dental Assistant and two Dental Technologists. It provides all oral health services except for the specialized dental services which are referred to a national referral hospital. On a normal day the dental department at QEII hospital sees up to 100 patients and most of them need a procedure to be done commonly it is extraction (MOH, 2016). The convenient sampling was used to select the hospital where QEII hospital was chosen for practical reasons as the researcher resides in the same district and so it was feasible to track the oral care path of the patients who were interviewed. Furthermore, due to lack of oral health services in the health centres, people from rural parts of this and other districts also utilize oral health services provided at the health facilities in Maseru town.

1.2 Problem statement

The oral health programme in Lesotho aims to offer curative, preventive, promotive and rehabilitative oral health services. However, observations as well as annual reports suggest that oral health service utilization is poor, as most patients only attend dental clinics with advanced stages of decayed teeth which can only be extracted. Similar to reports from other countries in Africa (eg. Olaleye et al, 2013 and Kadaluru et al, 2012), the Lesotho Annual Joint Review reports that dental extractions account for 60% to 70% of all oral health services, and restoration for 2% to 5% of services (MOH, 2009 to 2014). Despite substantial anecdotal and experiential evidence, the reasons for this very undesirable late utilization of oral health services have not been systematically explored and understood. This makes it difficult for health planners to find solutions for improving access, utilizations and responsiveness of health services.

1.3 Purpose

The purpose of this study is to explore and describe the barriers to utilization of oral health services in the country from the perspective of both service users and health care providers. Gathered information will be used to inform policy makers at the central level in planning interventions that will improve the utilization of oral health service.

1.4 Aims and objectives

Aim

To better understand the factors influencing oral health service utilization in Lesotho

Objective

i. To describe oral health care providers' perceptions of and experiences with patients' utilization of dental services in Lesotho.

ii. To describe health centre nurses' perceptions of and experiences with community members' utilization of dental health services in selected districts in Lesotho.

iii. To explore individual, socio economic, cultural and other factors impacting on the utilization of dental services with patients attending dental department at Queen Elizabeth II hospital in Lesotho.

iv. To describe health system barriers relating to the utilization of dental services in patients in Lesotho.

v. To describe people's knowledge regarding oral health and type of dental services offered in facilities.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Oral health is integral to general health and essential for well-being. Oral health and general health have close linkages. On the one hand, oral health can be compromised by a number of chronic and infectious diseases which show symptoms in the mouth. On the other hand, oral diseases can lead to infection, inflammation, and other serious impacts on overall health. For example some general conditions increase the risk of oral diseases, such as an increased risk of periodontal disease in patients with diabetes. Most oral diseases share common risk factors with NCDs such as cardiovascular diseases, cancers, diabetes and respiratory diseases. These risk factors include unhealthy diets (particularly those high in added sugars), tobacco and alcohol use. They result in a very similar pattern of inequalities in oral and general disease burden between different population groups. Thus, maintaining good oral health is crucial to sustain general health and vice versa (FDI, 2014).

Oral diseases directly affect quality of life by having a serious impact on an individual's well-being and ability to fulfill desired socioeconomic functions. Decayed and painful teeth affect dietary intake and aggravate undernutrition in children because of the inability to masticate. The consequences of conditions like oral cancer and noma can be life-threatening and often result in lifelong functional impairment and death. Oral appearances also affect self-esteem and willingness to interact with others (Thorpe, 2006). Furthermore, oral diseases restrict activities at school, at work and at home causing millions of school and work hours to be lost each year throughout the world (Petersen et al, 2005). In order to maintain oral health in the community, services like preventive, promotive, restorative, rehabilitative and curative care should be in place to prevent oral diseases, restore functions and relieve pain. However, it is documented that in many African countries, the availability and accessibility of oral health services are seriously constrained and provision of essential oral care is limited (Varenne et al, 2006). The most prominent characteristics of oral health in Africa are low to very low caries prevalence and severity, with little increase; few oral health personnel and an imbalance between personnel types and population needs; and rural and peri-urban communities without basic care or with emergency care only, due to the high cost or unavailability of other treatment (Thorpe, 2006).

2.2 The burden of oral diseases

A brief description of levels of oral diseases may help to explain the burden of diseases in different countries. Studies have found different levels of oral diseases in different countries. The community oral health need is driven by the presence of oral disease burden on one hand and perception that available oral health services will help to solve the diseases burden on the other hand. This study is aiming at determining barriers to the utilization of oral health services, therefore a need to know the oral diseases burden as provides the foundation for the question what services are being rendered and how they are utilized.

Oral diseases such as dental caries, periodontal disease, tooth loss, oral mucosal lesions and oropharyngeal cancers, Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS)-related oral disease and orodental trauma are common worldwide and they are still a major public health problem in both developed and developing countries (FDI, 2015). From a systematic analysis of global burden of oral conditions of 1990 to 2010 oral conditions remained highly prevalent in 2010, collectively affecting 3.9 billion people. The global burden of oral conditions increased from 1990 to 2010, while a reduction was observed for all conditions. The observed 20.8% increase in the global burden of oral conditions was mainly due to population growth and aging (Marcenes, 2013) Untreated caries in permanent teeth was the most prevalent condition evaluated with global prevalence of 35% for all ages combined, whereas severe periodontitis in deciduous teeth was the 6th most prevalent conditions, affecting 11% of the global population. Severe tooth loss was the 36th most prevalent condition, with a global estimate of 2% (Marcenes, 2013). The major oral health problems in Africa among low socioeconomic communities, in order of severity, are cancrum oris (noma), acute necrotizing gingivitis (ANG), oral cancer, oral manifestations of HIV/AIDS, facial trauma, and dental caries (Thorpe, 2006).

Dental caries and periodontal diseases have historically been considered the most important global oral health burdens. At present, the distribution and severity of oral diseases vary among different parts of the world and within the same country or region (Petersen et al, 2005). Traditionally, the prevalence of dental caries was high in most developed countries while low caries levels have been observed in developing countries. Recently there is a significant

improvement in oral health status in developed countries which is attributed to changing patterns of sugar consumption, improved oral hygiene, effective use of fluorides, changing lifestyles and standards of living, establishment of school based preventive programmes, and effective use of oral health services (Varenne et al, 2006). Dental caries is still a major health problem in most industrialized countries as it affects 60–90% of school-aged children and the vast majority of adults. It is also a most prevalent oral disease in several Asian and Latin-American countries, while it appears to be less common and less severe in most African countries. The extent of dental decay is measured using the dmft/DMFT (primary dentition/permanent dentition) index. This is a count of the number of teeth in a person's mouth that are decayed, filled or extracted. The dmft/DMFT indices are widely used for indication of the prevalence of dental caries and the severity of dental caries experience in populations (Moynihan & Petersen, 2004). Dental caries experience in children express in DMFT index (Decayed Missing and Filled Teeth) is relatively high in the Americas (DMFT = 3.0) and in the European Region (DMFT = 2.6) whereas the index is lower in most African countries (DMFT = 1.7) (Petersen, 2003). Worldwide, the prevalence of dental caries among adults is high as the disease affects nearly 100% of the population in the majority of countries. Most industrialized countries and some countries of Latin America show high DMFT values (i.e. 14 teeth or more) whereas levels of dental caries experience are much lower in the developing countries of Africa and Asia (Petersen et al, 2005). WHO Regional Office for Africa data available in 2000 from thirty-nine sub-Saharan African countries on dental caries prevalence in children age twelve shows that thirteen (33 percent) have a very low DMFT (0.0 to 1.1), nineteen (44 percent) have a low DMFT (1.2 to 2.6), and seven (23 percent) have a moderate DMFT (2.7 to 4.4) (Thorpe, 2006).

National surveys and smaller studies in Africa have shown the prevalence of dental caries (decayed, missing, or filled teeth—DMFT) to be quite low, but with substantial regional variations (Moynihan & Petersen, 2004). However, the incidence of dental caries was predicted to increase in several developing countries in the region, particularly as a result of a growing consumption of sugars and inadequate exposure to fluorides (Moynihan & Petersen, 2004). A systematic review of publications from 1967 to 1997 on dental caries' prevalence in Africa clearly showed that the belief in increased prevalence of caries over time in Africa has not yet been supported. Rather a predominantly downward trend in dental caries was observed (Cleaton-Jones & Fatti, 1999). Another systematic review of studies on dental caries in adolescents aged

11-13 years old conducted between 1970 and 2004 in the Sub Saharan Africa (SSA), Latin America and the Caribbean has shown that both the prevalence and the mean DMFT were lowest in SSA adolescents. Again, the proposed increase in dental caries in SSA was not supported (Cleaton-Jones et al, 2006). The prevalence of dental caries experience and mean DMFT were reported as being low in SSA. Nevertheless the incidence of caries is reported to be increasing and more common in urban communities, and is reported to be occurring more frequently in females than in males (Okullo et al, 2003; Mashoto et al, 2010; Okullo & Haugejorden, 2004; Awadia, 2002). Increasing urbanization has also been shown to lead to observable increases in the prevalence of dental caries and other oral disease due to increases access to sugar products for example high levels of bottle feeding in cities have been associated with high rates of baby bottle tooth decay (Thorpe, 2006).

Symptoms of gum disease are highly prevalent among adults in all regions. Globally, most children have signs of gingivitis and, among adults, the initial stages of periodontal diseases are prevalent (Petersen, 2003). Severe periodontitis, which may result in tooth loss, is found in 5-15% of most populations. Juvenile or early-onset aggressive periodontitis, a severe periodontal condition affecting individuals during puberty that leads to premature tooth loss, affects about 2% of youth (Petersen, 2003). Chronic destructive periodontal disease occurs in a small proportion of most populations, regardless of location or socioeconomic status. Although no evidence exists of a causal relationship between gingivitis and calculus accumulation, many studies nevertheless report a high prevalence or severity of periodontal disease associated with poor oral hygiene or nutritional status (Thorpe, 2006). In a study by Albandar & Rams, 2002 it was mentioned that poor oral hygiene practices leading to inadequate plaque control and calculus formation, infrequent dental attendance, smoking and low socioeconomic position have been associated with an increased risk to develop chronic periodontitis. In industrialized countries, studies show that smoking is a major risk factor for adult periodontal disease, responsible for more than half of the periodontitis cases in this age group. Risk decreases when smokers quit, and the prevalence of periodontal disease has decreased in countries experiencing reductions in tobacco use (Petersen, 2003). Traditionally, it has been considered that periodontal conditions were the predominant oral diseases in developing countries; however, a study Albandar & Tinoco, 2002 showed that this disease is prevalent across many countries with different levels of

development. In Africa, the prevalence of chronic periodontitis is estimated to range between 0-20 percent.

Studies indicate that severe cases of oral diseases may result in increase in morbidity and mortality rates like in case of oral cancers which results in high mortality rate globally (Oral Cancer facts, 2015). The prevalence of oral cancer is on the increase in Africa. Annual incidence figures for oral and pharyngeal cancer are estimated at twenty-five cases per 100,000 in developing countries (Thorpe, 2006). In contrast, Lesotho has low levels of oral cancers as showed from unpublished facility-based data of 0.4% of oral cancers incidence rate in year 2012 (MOH, 2013/14). Despite this low incidence rates oral cancer is still of public health importance in the country due to high rates of mortality.

2.3 Oral health services

. In developing countries, oral health services are mostly offered from regional or central hospitals of urban centers and little, if any, importance is given to preventive or restorative dental care. Many countries of Africa, Asia and Latin America have a shortage of oral health personnel and the capacity of the systems is generally limited to pain relief or emergency care. In children and adults suffering from severe tooth decay, teeth are often left untreated or are extracted to relieve pain or discomfort (Petersen et al, 2005). Likewise in Lesotho most of teeth with dental caries present in the hospital are extracted for pain relief. In 2014 alone 73% of all teeth with dental caries presented in the hospital were extracted for pain relief (MOH, 2013/14)

The main barriers to providing good-quality oral health care services of any kind in African countries are related to infrastructure, services, and resource availability. Examples include unreliable or absent supply of water and electricity; transport and communication, which are difficult, expensive, and nonexistent in some seasons; an infrastructure and organization that cannot sustain services; and financial, human, and physical resources that are few and stretched throughout many priority areas (Thorpe, 2006). Absence of oral health services in health centres in the country like Lesotho is due to lack of resources like finance and human, infrastructure, and equipment.

2.4 Utilization of oral health services

Utilization is the actual attendance by the members of the public at health care facilities to receive care. It measures the number of visits per capita per year or the number of people with at least one visit during the previous year, and serves as an important tool for policy decision-making (Fotedar et al, 2013). It is suggested that in the context of developing countries, where service utilization for preventive and promotive care is generally poor, it is particularly relevant to gather data concerning utilization by people who have experienced oral trouble within the past year (Varenne et al, 2006).

Utilization of oral health services and its barriers are important parameters in oral health planning (Jain et al, 2013). This is because they provide useful information and guidance to health planners and policy makers to help in developing appropriate structures and appropriate resource allocation. Utilization of oral health services can be greatly influenced by various factors related to lack of knowledge on oral diseases and the type of oral health services offered in facilities, poor access to oral health services due to long distance, long waiting hours in the facilities, unaffordable cost of treatment due to high cost of dental fees, fear of dental procedures or lack of perceived need to seek services unless in pain (Varenne et al, 2006). Other factors could be geographical maldistribution of dentists (where Dentists are not equally accessible in all regions especially in rural areas like in Lesotho, so people who live in these areas must travel long distances to access dental services), cultural attitudes and values, level of education and transportation (Jain et al, 2013). These are some of the factors to be explored in this thesis.

Despite the high levels of oral diseases in Lesotho, utilization of oral health services are still very low as people visit dental clinics for pain relief or in need of emergency services. This trend is also seen in many other countries like Nigeria, China, India, South Africa, Saudi Arabia where studies found that utilisation of the oral health services was low among the study population (Okeigbemen &Nnawuihe, 2015; Olusile et al, 2014; Lo et al, 2001; Kadaluru et al, 2012; Molete et al, 2014; Al-Swuailem et al, 2014). A study done in Ouagadougou Burkina Faso showed that the use of professional oral health care services was alarmingly low (Varenne et al, 2006).

2.5 Factors affecting utilization of oral health services

2.5.1 Individual factors

Utilization of services can only be complete if services are adequately available and people are willing and/ or able to utilize them. People's choices to seek oral health services are based on a range of demand and supply factors, meaning is it depends on the willingness of people to use oral health services and the availability of oral health services respectively. It has been argued that access to health care services is merely a question of supply, while utilization depends on both supply and demand (Vashisth, 2012). If someone wants oral health services, and has access to resources, and is willing to pay, that person can demand service.

2.5.1.1 Perceived need

Perceived need refers to an individual's own judgment about the necessity or benefits of a particular service. Perceived health need is the need for health services as experienced by the individual and which he/she is prepared to acknowledge. For example, patients often present themselves for dental care at the later stages of dental disease when overt symptoms such as pain and extreme discomfort appear, rather than earlier. Thus there may not be perceived need, even though there is a definite clinical need.

The most commonly reported reason for not seeking dental care is the widely held perception that one needs to visit dentist only when there are symptoms such as pain and emergency. Many studies show that one key reason for this is the belief that oral diseases are not serious or life threatening. Fotedar et al (2013) and Aikins & Braimoh (2015), for example, report in studies in India that 62.5% and 70% of the respondents respectively believed that there is no need to visit a dentist unless there is pain. The same was seen in a study by Christensen & Helderman n/d) done in Tanzania where 91% of subject visited dental clinic only when experienced pain mainly from toothache. This can also be supported by another study done in India by Kakatkar et al (2011) and Ajayi et al, 2012 where reported reasons for visiting Dentist in the past were related to having oral symptoms or pain. In other studies done in Tanzania, dental pain and discomfort were cited as common reasons for seeking dental care (Kikwilu et al, 2008 & Mashoto et al, 2009). Kadarulu et al (2012) also found in their study that the majority of the dental visits were

for treatment of acute symptoms rather than for preventive care and that majority of the dental visits by the participants were for tooth extractions or treatment of acute symptoms. This was thought to be because the presence of pain may indicate a more serious problem and usually a motivating factor to seek treatment and thus the need for emergency dental treatment (Kadarulu et al, 2012).

2.5.1.2 Fear and anxiety

The terms 'fear' and 'anxiety' can be used interchangeably, and they are very much related. Generally a person will have a fear response to something that they experience anxiety about. Fear and anxiety for dental procedures is one of the common factors leading to non-utilization of oral health services. Patients' anxiety might be in relation to fear of gagging or choking, fear of injection, or a strong aversion to the sight or thought of blood. Patients might have concerns about perceived problems with getting numb, might have a low pain threshold or might have issues with trusting dental practitioners (Armfield &Heaton, 2013).

Dental anxiety and fear, whether derived from prevailing community beliefs or personal negative dental experiences, greatly influences attitudes regarding accessing oral health services, and have not changed over time, despite advances in dental equipment, procedures and preventive measures (Ajayi et al, 2012). Different studies have reported fear as the main barrier to oral health services utilization. Studies done in India (Fotedar et al, 2013 and Kakatkar et al, 2011) found that fear of dental procedures was one of the factors for not visiting dentists. These studies showed that attitude to dental pain has gender and age dimensions: Kakatkar et al (2011) and Fotedar et al (2013) showed in their studies that females had greater fear of dentists than males, resulting to lower dental visit rates by females compared to males, unlike other studies where utilization of oral health services was still high in female despite being their high level of fear. One study done in Ibadan, Nigeria, found that fear of injection, experiencing pain and contracting infection from dental procedures had the highest score, making them the most common barrier to oral health services utilization (Ajayi & Arigbede, 2012). Fear of pain and injection was also found to be one of the barriers to utilization of dental services in a study done by Aikins and Braimoh, 2015.

The noise of the dental drill during treatment was also identified as the reasons for poor utilization of dental services, this was seen in a study done in Nigeria where the feeling of insecurity when the dentist is operating in the mouth and disturbing noise from dental drill respectively were among the barriers often cited by patients (Ajayi & Arigbede, 2012).

2.5.1.3 People's knowledge regarding oral health and type of dental services offered in the facilities

Health literacy is important for individuals to gain the knowledge and skills necessary for maintaining good health, including oral health, for themselves and for others who depend on them. Knowledge is defined as the expertise and skills acquired by a person through experience or education with the ability to use it for a particular purpose (Sharda, & Shetty, 2008). According to some researchers, an individual's eventual choice of oral health care, whether of a conventional service, traditional or self-medication was dependent on information available to him, his attitude, self-perceived oral health care need and the financial resources available to him (Lee et al, 2014). This is supported by a study where being well aware of dental health care and services was found to increase with higher level of income, education, having ever utilized a dental service and a positive attitude towards a regular utilization (Osuh et al, 2014). According to Symth et al. (2007), there is strong evidence of a correlation between oral health knowledge and better oral health practice by giving adequate information, motivation, and practice of oral health measures to individuals.

Poor oral health knowledge contributes to poor access because individuals may not understand the importance of oral health care or their options for accessing such care. In an Indian population limited awareness about the dental diseases and treatment modalities was responsible for low level of access to dental care. This was evident in the study, where 65% of subjects reported that they have no knowledge regarding how to take care of their teeth and treatment provided (Jain et al, 2013b).

2.5.1.4 Access of oral health services

Access to dental care is important to enhance and maintain good oral health, because oral health is an integral component of general health. Access is a term used for a broad set of concerns that center on the degree to which individuals and groups are able to obtain needed services from the health care system (Academy of general dentistry, 2012). In the past factors external to the patient, for example, adequacy of the dental work force and ability to pay for care were the primary determinants of access. Now, discussions of access take into account factors internal to the patient: the perceived need for care, cultural preferences, language and so forth. Therefore, when speaking of access to dental care today, we must consider both the availability of dental care and the willingness of the patient to seek that care (Guay, 2004). Access to health services is often measured not only by the supply of dental services but also by the utilization of dental services (Obeidat, 2014). It is said that in many developing countries, access to oral health services is very limited, while in developed countries and in some industrial countries, access to oral healthcare is much better (Petersen, 2003). In Lesotho there are no dental health services in rural areas resulting in people having to travel farther to obtain oral healthcare.

2.5.2 Social and economic factors

Income, education and occupational status are the common social and economic factors related to utilization of oral health services. These factors together with the above mentioned factors are the common individual factors, but health system factors which will be discussed later are equally important. An individual's income, education, and occupational status are often closely interrelated. Inadequate resources, such as income, limit people's choices and priorities. The difficulties and problems encountered by people on low income is said to be related to the degree of competition for the families' disposable income. Where competition is the greatest, dental treatment may be felt as an unaffordable luxury and, even if being valued, may be low on a list of priorities when compared with other essential commodities (Freeman, 1999). A study done in Udaipur, India found that income had a negative and significant correlation with the dental visits and dental care utilization. This was associated with having to cut back on spending on other goods and services, suggesting that dental care utilization is a competing financial demand for economically constrained families and communities (Kakatkar et al, 2011).

2.5.2.1 Income/financial

The expensive nature of dental treatment has consistently remained a barrier for utilization of oral health services (White 2012; Ajayi et al, 2012; Varenne et al, 2006). Statistics throughout the world show that people's ability to access regular dental care is directly related to their annual income. A cross sectional study done in Tanzania in 2007 on use of dental services and the factors influencing its use in urban populations, suggested that more than half of the study population could not use dental services due to inability to pay (Kikwilu, Masalu et al. 2008). Other studies by Kadaluru et al, 2012 and Aikins &Braimoh, 2015 done in India and Nigeria respectively, found the main barrier to the utilization of dental services being high cost (user fees) where dental care was obtained on pay for service basis in government dental centres with no insurance or subsidy. Hence the availability of payment schemes other than out of pocket expenditures have been associated with increased access to and utilization of dental services (Ahlberg, Tuominen et al. 1996).

Through dental insurance, for example, financial barriers are eased or removed, out-of-pocket expenses are reduced and the buying power of patients is improved. As a financial factor of the health care system, the presence of dental insurance, meaning third-party payment, is positively related to an increase in the demand for utilisation of oral health services as seen in studies from The Netherlands and Australia by Abraham et al., 2003; Slack-Smith and Hyndman, 2004 respectively. Several studies in developed countries have reported details of dental insurance schemes and their impacts on oral health care. Some of the studies in developed countries on dental insurance from Finland and Spain showed the importance of dental insurance in the demand for and utilization of oral health care services (Suominen-Taipale, 2000 & Stoyanova, 2004) and other studies from Canada and USA showed that in comparison with the non-insured subjects, those with dental insurance visit a dentist more regularly (Locker and Leake, 1993; Bendall & Asubonteng, 1995) and have frequent dental check-ups (Sohn & Ismail, 2005; Woolfolk et al, 1999). Such studies are rare in developing countries like Iran where treatment-oriented health care delivery system is prominent and may discourage regular use of oral health care services (Bayat, 2010). Unlike most western countries, specific dental insurance plans are not common in developing countries. For example, dental insurance is universally nonexistent in India (Singh et al, 2015).

2.5.2.2 Education

Education is correlated, with the use of dental services: the higher the education, the higher the probability of having a dental visit. Education can lead people to be more health-conscious, and helps them make better and healthier lifestyle choices. Conversely, lower knowledge of oral health can be associated with unhealthy behaviors and less interest in preventive treatment. In a study done in Shimla, India, for example, the group with higher education showed higher dental visits than the group with lower education indicating that education may be correlated with high health consciousness, which in turn stimulates preventive behaviour such as regular visits for a check‐up (Fatedar et al, 2013). In another study by Sourabha et al (2015) it was found that patients with more than high school education were more likely to have seen a dentist regularly and use all of the dental services except extractions than those with less education. A study done among the population age fifteen and older found that age at leaving school was most significantly associated with utilization among the oldest groups. Those who continued their education beyond age eighteen were 1.85 times more likely to have visited a dentist in the past year than those who had never attended school or had quit at age fifteen (Kiyak et al, 2005). In the above studies there was no association made between educational status and economic status in terms of better jobs and more purchasing power, however in the study done in India on the barriers to utilization of dental services association between cost of dental care and education, it was found that the higher education group found the expense of treatment less restrictive than the lower education group (Kakatkar et al, 2011).

Poor socio-economic conditions as shown by low education level, unemployment and small household income, have also been shown to be important factors associated with lesser likelihood of going for a dental visit during pregnancy (Al-Habashneh et al, 2005; Lydon-Rochelle et al, 2004). In a study done on pregnant mothers in Malaysia the reverse of this was found: dental visit was lower in expecting mothers with tertiary education, who were working, and had higher household income (Saddki et al, 2010). The explanation for this was that higher education may lead to jobs with better salaries that keep the mothers very busy thus showing the effect of occupational status in relation to oral health services utilization.

2.5.2.3 Occupational status

To a great extent occupation is a product of education and a determinant of income. The Health and Nutrition Examination Survey (HANES) conducted by the National Center for Health Statistics (NCHS) in USA showed that utilization varies with occupation, and that people in white collar occupations use dental services more than those in blue collar jobs (National academic press, 1980). This difference appears to persist long after financial barriers are removed. In a case study of workers in a prepaid dental plan, different occupational groups continued to show markedly different utilization rates even after six years in the plan (National academic press, 1980). In a study by Kiyak et al, 2005 it was found that blue collar workers were only half as likely as other occupational groups to have made dental visits in the past year, but were 2.5 times more likely to have had an extraction at their last visit than those in managerial or professional occupations.

2.5.3 Health system factors

Health system barriers to utilization can be due to transport, ineffective communication, poor attitudes of service providers, waiting time and inadequate opening hours (Kronfol, 2012). Effectiveness of health systems depends on how the nation uses its resources like personnel, facilities, equipment and materials to produce outcome. Availability of human resource is important for decision making and organising how other resources can be utilised to cater for the needs of their clients. Adequate or scarce resources other than human resources also play a big role in oral health service utilization. A study done in Sudan reported an association between low utilization of oral health services in rural areas and poor resources like shortage of instruments and human resources (Yousif & Miakeen, 2009). Another study done in a South African public oral health service found that high patient load/work load and insufficient provision of materials/instruments and dentists perceived to have low clinical skill levels in performing Atraumatic Restorative Treatment procedure (the simple restorative procedure performed at a community level to restore decayed teeth using hand instruments and filling material) were the greatest barriers to providing such services in the public oral health services (Mickenautsch & Frencken, 2007).

2.5.3.1 Geographical: Transportation system

Transportation is an important factor in accessing health facilities, especially in rural areas where distances to health care facilities are far and facilities inaccessible, as is the case in Lesotho. Access is limited if services are located too far from patients or in places that are not easily accessible. This is true for individuals that reside in both rural areas and in inner cities where transportation may be limited or lacking (Cappelli & Mobley, 2008). Transportation is an important factor in accessing health facilities, especially when people are dependent on public transport like in developing countries, where car ownership is limited in the more disadvantaged groups. Rural roads are often less accessible, of a lower quality, or in a lesser state of upkeep than those in urban areas and public transport in such areas is very scarce. Most people who are unable to own cars are often dependent on friends or neighbours for transportation, and this limits their flexibility. In a study by Jain et al, (2013) it was found that 72% of the subjects explained that travelling to the dentist is too difficult and 56% thought that lack of adequate transport to dental care facilities is one of the major barriers to access dental services. This is supported by another study where it was reported that accessibility to dental care was a factor in the utilization of dental services (Aikins & Braimoh, 2015). Rural–urban inequalities in access to health care are an important factor in several countries, particularly given that rural areas often experience a more fragile economic and demographic situation, with more people at risk of poverty (Kronfol, 2012), thus creating a double hindrance of socio-economic and structural barriers.

2.5.3.2 Administrative: Communication and attitude of oral health personnel

It is generally accepted that the provider-patient relationship, built through the effective use of language and communication, is central to the practice of medicine. Reviews of the literature (Kaplan et el., 1989; Stewart et al 2000) indicate that there is a relationship between the quality of patient provider communication and the patient's health outcomes. Effective interpersonal communication between health care provider and client is one of the most important elements for improving client satisfaction, compliance and health outcomes. Patients who understand the nature of their illness and its treatment, and who believe the provider is concerned about their well-being, show greater satisfaction with the care received and are more likely to comply with

treatment regimens (Negri et al, n/d). Language plays a big role in communication; the problem of ineffective communication caused by language difficulties often stays unsolved, leading to frustration and exasperation, with patients feeling neglected and detached (Scheppers et al, 2006). Communication style of the health providers is also important, as the authoritative communication style of the care provider can act as a barrier in health service utilization. The confrontational way in which health care personnel sometimes approach for example an ethnic minority patient can further result in shame and discomfort (Scheppers et al, 2006).

In a study done in Kenya to determine client satisfaction it was found that high client satisfaction was associated with friendly and understanding service providers, and that a service delivery point's good reputation often encourages users to return, which promotes access, utilization and service continuity (Wambua et al, 2015).

2.5.3.3 Organizational: Waiting time

Waiting time indicates the period spent by a patient from arrival at a facility to the time when he/she is called into the surgery unit to start dental procedure/treatment. The amount of time that the patient spends at the health facility has often been used as a measure of the patient's satisfaction with the service being provided. Studies have shown that the patients' experience of waiting greatly influences their perception of the quality and the overall satisfaction of the service rendered (Nannozi, 2013). Patient waiting time is often one of the most frustrating parts of a healthcare delivery system. The amount of time a patient waits to be seen is a key factor that affects the utilization of health care services, and patients perceive long waiting times as barriers to actually obtaining services. The reported three most common factors leading to long waiting time were high patient load, staff shortages and record clerks (Khatoon et al, 2016).

Waiting time is an important quality indicator in measuring the outcome of any medical service. Extended waiting time at the dental clinic and substantial delay in receiving the needed care had resulted in patient dissatisfaction with the care provided (Sur et al, 2004). Most mothers in the study by Saddki et al (2010), showed that time was important, as reflected in their responses that they were busy either at work or running the household chores. Consequently, 'late appointment' and 'long waiting time' were important barriers that prevent access to oral health care services among them.

2.5.4 Cultural factors

Medicinal plants play an essential role in primary healthcare as they are used to treat wide varieties of oral diseases because they possess antibiotic and anti-inflammatory properties (Agbor &Naidoo, 2015). According to the World Health Organization (WHO), more than 80 percent of Africans rely on traditional medicine and indigenous knowledge to meet their health needs (WHO, 2002). This was said to be due to the fact that traditional medicine is accessible, affordable, culturally and socially acceptable and most people prefer it to the 'exorbitantly priced' conventional Western medicine (Agbor &Naidoo, 2011). It has been reported that about 10 different oral/dental conditions are treatable with plants in traditional health practice, namely, toothache/decay, gingivitis, ulcerative gingivitis, angular stomatitis, mouth ulcers, swollen tonsil, oral thrush, tonsillitis, and black tongue (Hollist, 2004). In many of the developing countries, the use of plant drugs is increasing because modern life saving drugs are beyond the reach of most people (Kayombo et al, 2007).

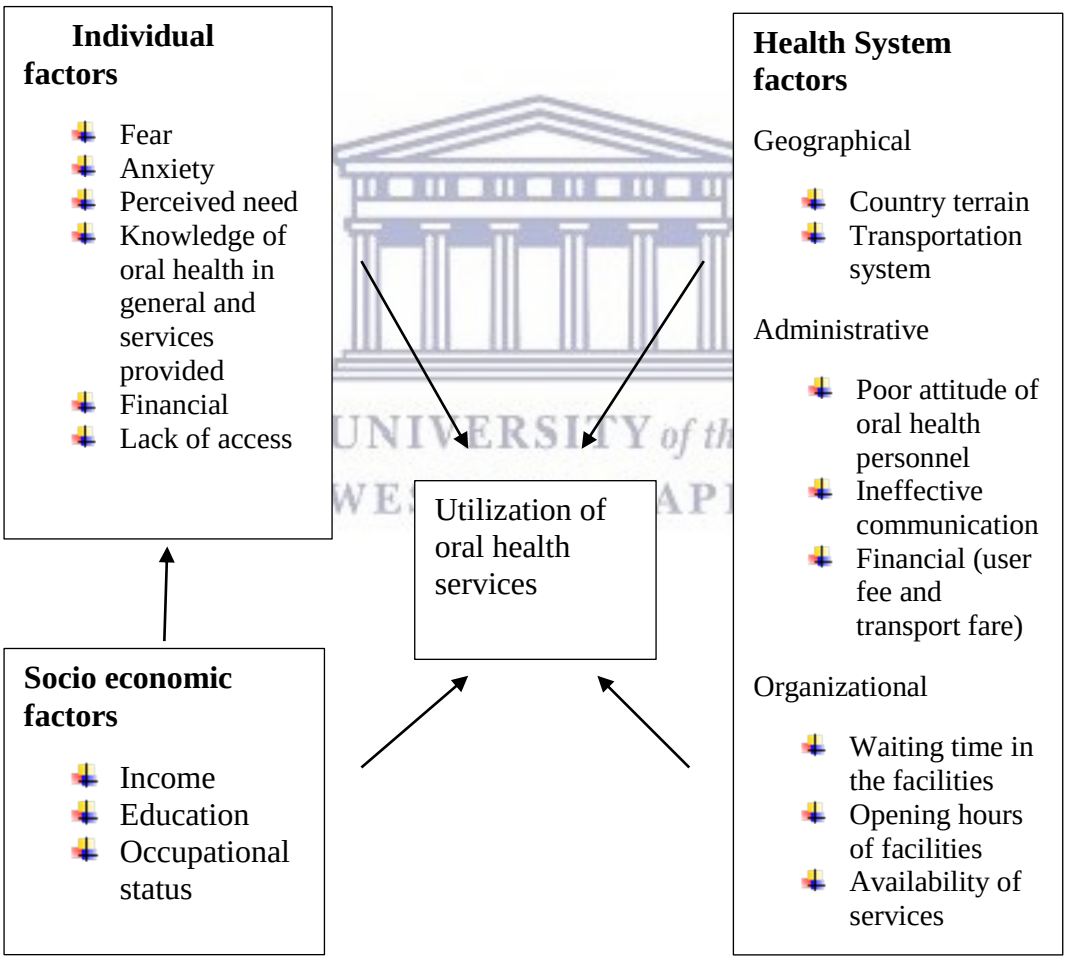
Review of literature shows the use of traditional medicine in different parts of the world. The result of a study in the Tanga Region of Tanzania showed that dental patients are commonly treated by traditional healers and more than half of inhabitants with toothache sought treatment from traditional healers, where they had all been treated with local herbs. This health seeking behavioral pattern was not altered by the establishment of modern emergency oral care in rural health centers and dispensaries did not influence the villagers' use of the traditional healers (Ngilisho et al, 1994). In Cameroon studies showed that native herbs are common self-medicament for oral diseases and that traditional healers are involved in tooth extractions (Agbor et al, 2011) and the treatment of other oral diseases like the oral manifestations of HIV/AIDS (Agbor and Naidoo, 2011). It was also documented that Cameroonians use herbs for self-medication for oral health problems (Agbor &Azodo, 2011). In Sri Lanka a study by Nanayakkara & Ekanayake (2008) found that traditional medicines were still used for treating common oral conditions in rural part of the country and of the total sample in the study, 56% had used a home remedy for his/her oral condition.

Some of the medicinal plants which have been used for such purposes include the clove which has been used in India and China, for over 2,000 years to control both tooth decay and counter

bad breath. It now used extensively in dental care for toothache, sore gums, and oral ulcers relief (Agbor and Naidoo, 2015). Allium sativum also called garlic is a common food spice and medicinal plant. The paste made from the bulb is used by direct application to a painful tooth to relieve toothache and treat gingivitis. It has broad spectrum antibacterial, antiviral, and fungal activity (Goncagul & Ayaz, 2010)

CONCEPTUAL FRAMEWORK

The following conceptual framework summaries the factors affecting utilization of oral health services and their interaction



CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1 Research design

Qualitative research is a type of research method which is primarily exploratory and/or explanatory in nature and provides understanding of human experience, perceptions, motivations, opinions, intentions, and behaviours based on description, observation and utilizing a naturalistic interpretative approach to a subject and its contextual setting (Robson, 2011). A qualitative approach was selected for this study because of its in-depth nature of inquiry, which has a potential to reveal more about people's attitudes, experiences and practices than quantitative data can.

3.1.1 Study Design

The appropriate study design to address the research problem was an exploratory and descriptive design using qualitative method, exploring perceptions and experiences of patients and health care providers regarding utilization of oral health services in Lesotho. The factors that impact oral health services utilization were investigated using mixture of interviews of dental patients and health centre nurses and focus group discussion of district dentists. Interviews were chosen because they help understand other people's world and explore participant's point of view, feelings and perspectives. They are very useful when one is trying to gain a thorough understanding of a phenomenon, for example utilization of health services (Nemarundwe, 2006). Focus group discussion was selected because through group interaction they stimulate participants to consider and reveal opinions they might not have chosen to reveal individually (Robson, 2011).

The researcher is the supervisor to all oral health personnel in the country. This holds the potential for bias generated by hierarchy, yet the insights and experiences of oral health personnel in the country are essential to this study. For this reason the researcher, in agreement with her supervisor, decided to adopt an approach which borrows from participatory research methodology (Lowenson et al, 2014).

3.2 Population and sampling

The population for qualitative study is supposed to include people who have direct experience of the phenomenon or problem under study (Robson, 2011). In the case of this study the population included adult patients who attend the Dental clinic in Maseru district public hospital (Queen Elizabeth II) at the time of the study (primary study population), oral health service providers in dental health services in Lesotho, as well as nursing staff in health centres in the country, the latter two as key informants.

The inclusion criteria were patients originating from Maseru district; and adults above eighteen years old. Children are left out because their access to services may be determined by their parents and not themselves, which could complicate data collection and analysis. Adults from different geographical parts of Maseru, that is lowland and highlands (urban and rural part of Maseru), adults from low and high social economic status, adults who seek oral health services early and late are included to establish what helped or hindered their attendance. Adults of different age group and sex are included to give good variations. Exclusion criteria were dental patients who were physically or mentally unable to be interviewed.

The researcher visited dental clinic prior to data collection time to establish the pattern of patient's attendance and strategically target those days when many patients that met the inclusion criteria were present. Sampling of primary study population was done from the dental patients attending the clinic on the days of data collection. 14 dental patients were randomly selected observing inclusion criteria.

In addition to interviews with patients two focus group discussions and interviews were conducted with key informants from the health services: 12 Dental Surgeons, 3 Dental Therapists and 1 Oral Hygienist working in district public hospitals and District Health Management Team respectively

Due to the lack of oral health personnel in health centres facilities, health centre nurses attend to dental patients who attend their clinics by providing painkillers and referring them to the district hospital. This made another group of key informants. Four health centre nurses were randomly selected to cover geographical parts of Maseru, i.e. highlands and lowlands.

3.3 Data collection

Data collection was done using a one to one semi-structured in-depth interview of the primary study population (appendix III) and health centre nurses (appendix IV). The mode of interviewing was face to face since it provides rich data as the participant is visible to the researcher and she can pick up on non-verbal cues. Audio recordings were made of all interviews to help the researcher to go back to it at any time and pick up on information she might have missed. This was useful since the semi-structured interviews contained open-ended questions and discussions revealed a lot of detail was recorded and later transcribed for analysis. The interviews of the patients who signed the informed concert form (appendix II) were done in a private room and took at least 15 to 30 minutes for each participant, that is excluding 15 minutes of going through and explain to patient the information sheet (Appendix I) before signing the consent form. A Sesotho speaking person was recruited as an assistant researcher to help during interviews of patients who do not speak English[1]. Translation of the participant's information sheet, informed consent form and interview guide into Sesotho language was done prior data collection. The researcher, together with the oral health personnel working as logistic coordinator in a Supply Chain Coordinating Unit in the ministry of Health, practiced the data collection process before the actual data collection time.

Data collection for key informants (Dental Surgeons) took place in a biannual Dentist, Dental Therapists and Oral Hygienists progress meeting, where all dentists, Dental Therapists and Oral Hygienists from the district public hospitals and District Health Management Team from the whole country meet in one place. The researcher took advantage of the meeting as it is the only place where all these oral health personnel could meet. After the meeting the researcher asked for the consent from all oral health personnel present and then she gave a brief introduction, at which the researcher presented the study rationale general discussion around the subject in question and then gave a brief summary of the finding from the primary study population and the literature review. There after 16 oral health personnel were divided into two groups of eight to discuss these findings against the background of their own experiences and knowledge. Each

[1] Researcher is a Tanzanian who resides in Lesotho. Although she can speak Sesotho fluently there are chances that when some Basotho, especially from rural area, speak deep Sesotho she may miss some point. For this reason a Mosotho Oral Health practitioner assisted with the interviews.

group was in a different rooms and the discussion took place at the same time where each group was given one hour. The researcher being the line manager of the members of the FGD did not attend the discussion to avoid members feeling intimidated This was also done to give them an opportunity to share their experiences in relative anonymity (i.e. without the researcher/line manager presence. They were asked to compare, contrast, validate, and share experiences across different districts in the country and at the same time to state the shortcomings of the present oral health services in the country which could contribute to the problem and advice on what could have been done to improve utilization of oral health services (Appendix V). Emerging information triggered additional questions and the researcher checked her understanding during discussions by asking for clarifications when in doubt. This discussion aimed at exploring oral health care providers' perceptions of and experiences with patients' utilization of oral health services in the country. As expected it yielded rich data and stimulated participants to reveal experiences and opinions that also helped the researcher to refine data collection tools for the remaining interviews with patients. The plenary discussion was audio-recorded for the researcher to go back and gather information she might have missed. The two FGDs were also audio-recorded.

3.4 Data analysis

Managing data can be done manually or using a computer-aided analysis tool (software like Atlas ti). For the purpose of this study data was managed manually using a Thematic Approach (Braun & Clarke, 2006). This is the most common form of analysis in qualitative research. It is used for identifying, analysing, and reporting patterns within data. It helps organise and describe data sets in detail. The approach further enables the researcher to interpret various aspects of the research topic (Braun & Clarke, 2006). Thematic analysis is performed through the process of coding in five phases: familiarization, coding, identifying themes, defining and naming themes and integration and interpretation (Robson, 2011).

The researcher started to analyze data during data collection in order to build on issues raised during focus group discussions of oral health personnel. Data were then organized and coded according to content, drawing on emerging themes that related to individual, health system, socio economic and cultural factors. The process was facilitated by the inclusion of notes taken by the

assistant researcher, and the discussion with her on the interpretation of data. A final analysis was done when the researcher and her supervisors were satisfied with the themes identified for the final report.

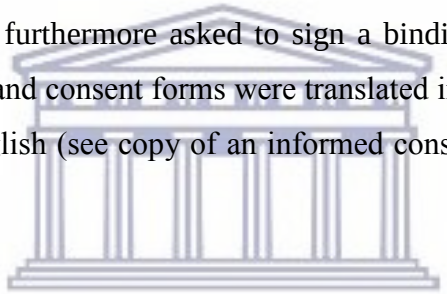
3.5 Rigour and trustworthiness

The researcher strived to ensure trustworthiness by being transparent about the research process and providing rich description of the data collection, analysis, and interpretation, and the various ways these may be influenced. This was further reinforced through respondents' voluntary involvement and rechecking responses where the researcher confirmed the contents of each interview with the respondents after each interview to be sure that her understanding of their responses was correct. The researcher took additional notes during each interview (field notes) to record aspects that could not be captured on tape such as body language, events that might have influenced the responses or actions that took place on the day of the interview

The lenses of the researcher, supervisors' and colleagues' viewpoints were used for establishing validity in the study. The validity was also obtained from interpretive paradigm using trustworthiness criteria like credibility and dependability by triangulation and reflexivity. For *triangulation* of the study the researcher established multiple forms of evidence through use of multiple data sources, from adult dental patients attending Queen Elizabeth II hospital (primary study population), oral health personnel and health centre nurses (key informant) and using multiple data collection method that is in-depth interview and Focus Group Discussion. To add credibility to the study the researcher also used frequent *peer debriefing* with her supervisors and some colleagues from the oral health programme with experience of qualitative research to provide written feedback and at the same time act as a sounding board for ideas. The researcher accomplished *reflexivity* by keeping a diary to record her personal thoughts, beliefs and feelings.

3.7 Ethics considerations

The study was conducted after getting ethical approval from the University of the Western Cape (UWC) Senate Research Committee, Ministry of Health Research and Ethics Committee, Medical Superintendent of Queen Elizabeth II hospital and Maseru District Health Manager. A letter explaining the research purpose and process, risks and benefits, requesting consent and assuring confidentiality and anonymity was made available and discussed with each participant. Enough time was allocated for this to make sure that all participants understood everything and all concerns raised by participants were addressed (see Participant Information Sheet in Appendix I). Particular care was taken to explain the importance of confidentiality to those who participated in focus group discussions. Consent forms were signed by all participants who were willing to take part in the study by interview and focus group discussion respectively. Participants in the FGDs were furthermore asked to sign a binding confidentiality form. Both participant's information sheet and consent forms were translated in Sesotho for participants who did not speak or can't read English (see copy of an informed consent form in both languages in Appendix II).



CHAPTER 4: FINDINGS

4.1 Introduction

This chapter describes the views of the patients of oral health general knowledge and the barriers to access oral health services/ to oral health service utilization. On the other hand the perceptions and experience of oral health personnel and health centre nurses as service providers, of the patients' utilization of oral health services, barriers to access oral health services/ to oral health service utilization, patients' health seeking behaviour and at the end suggested approaches to improve oral health services. The results also highlight suggestions on what ways patients thought oral health services could be improved. Some of the direct quotes expressed by patients and service providers are included in this chapter to support the findings of the study.

4.2 General knowledge on oral health

General knowledge of patients on oral health issues focused on the most common oral diseases, their causes and how to prevent them. From the in depth interviews conducted most patients knew the most common oral diseases. Their knowledge on oral diseases was mainly around dental caries, gum diseases, ulcers in the mouth, accumulation of plaque, stains on the teeth, oral cancer, trauma causing injuries on the tongue and bad breath. Out of 14 patients 8 knew dental caries and gum diseases as the common oral diseases, but only one participant knew about oral cancer.

> *"I only know that sometimes you can smell in the mouth, it was having something, it was having a hole, sometimes you can have some sores in the mouth, Feeling pain in the tooth" (Patient 4).*

> *"There is sometimes bleeding from the teeth, some have problems of smelling in the mouth and some sores, my teeth went out of position, while I was playing, am a soccer star so I was kicked and my tooth went out of position that's why I came and sometimes you will find that tooth cracks. It starts to feel pain inside" (Patient 5).*

> *"My teeth are rotten, they are damaged and after that they are broken come out piece by piece leaving only the lower part when the whole upper part is finished, on top of that my*

gums get swollen and pus is coming out. On top of that I only know that when the tooth is rotten it will break until it finishes" (Patient 11).

Although most of patients knew the common oral diseases they didn't express enough knowledge on how these diseases occurred, which is important when it comes to prevention. Out of 14 patients only 6 knew what causes dental caries and gum diseases. Four patients didn't know the cause of oral diseases at all and four mentioned wrong causes of dental caries, while three of participants who got it right said they were not sure.

Sweets or sugar taken when you are young affecting the teeth causing tooth decay, Disease affecting you when you are young e.g. sharing apple with someone causes gum diseases (Patient 1).

"Am not sure what causes that hole of the tooth I can't say but I think it is created on its own because this black hole I can't see what cause it" (Patient 10).

"Broken tooth or decay sometimes, I think is cause when i used toothpick and i used tooth pick between the teeth sometimes it bleed after using that toothpick. I think that thing causes that tooth to break cause, if I have a wound between that and bleeding sometimes and eating, so I think it cause that tooth to rotten and break" (Patient 7).

Misconception on what causes dental caries which patients highlighted, may be the common knowledge in the community, which could lead to people not understanding or adhering to preventive measures recommended by oral health service providers. An example of this is the thought that dental caries is caused by a certain worm found in the teeth and if one went deep into the cavity one would find that worm.

"Basotho always believe that they got something like a worm inside the teeth, how I don't know. I don't know how to prevent tooth decay I don't know. I think is only God who knows about my teeth" (Patient 14).

Most participants (9 out of 14) stated the prevention of dental caries and gum disease being brushing teeth thoroughly, but only 2 patients knew that avoiding eating sugary foods especially in between main meals is another way of preventing dental caries.. Three participants stated that visiting a dentist for check-up can also help in prevention of oral diseases.

"I think the best prevention is to see a dentist to wash our mouth and you should brush your teeth after every meal or at least three times a day. I think that is the best prevention" (Patient 3).

"Sometimes we can start by after eating you clean your mouth, after washing it you should wash it well and let it stay clean. You should wash at least three times a day or more. Because if you leave the food in the mouth it will make bacteria" (Patient 4).

"I think the best way of is just to go to the dentist and get some advice; By eating fruits I think yaa, checking to a dentist twice for examination; avoid eating sugary substances and if you eat sugar then one should drink a lot of water to avoid that sugar to stay in the tooth after eating it" (Patient 5).

"We can prevent cavities and bad breath by proper brushing and use of mouthwash and do the regular visits to the dentist so that they can see the to prevent problems that can happen to the patient" (Patient 2)

One of the preventive measures of oral diseases is regular visits to dentist for check-up. This helps in early diagnosis of oral diseases and plan for proper management. Patients can also be given oral health education on causes and prevention of oral diseases. Three patients mention check-up as one of the preventive measures of oral diseases but still they didn't know when to seek dental treatment when they have an oral disease.

"People do not have enough education and that is if they notice anything funny in their mouth they have to come, they seek help from other people and they end up using traditional medicine and because of lack of knowledge" (patient 6).

"It is not in peoples mind. They don't even think about it. But if they knew they have to come to the dentist to check their mouth they would come" (patient 10).

"People can see the tooth is decay but they don't take action. Yaa I think is more to do with education and the awareness. People don't know what to do so they should be made aware all the time" (patient 12).

Health centre nurses mention in their interview that patients lack information when it comes to the right time to seek dental treatment other than waiting when there is pain.

> *"There is lack of information on patients' side as to when to report to the hospital for dental treatment" (Health centre nurse 3).*

The Focus Group Discussion for oral health personnel commented that sometimes knowledge is not enough, because there are people with enough knowledge but they are still delaying seeking dental treatment. They felt that there are other factors, which may surpass the knowledge that people have and contribute to delay treatment seeking. These factors could be fear of dental treatment, accessibility of oral health services, traditions or culture of using traditional medicine.

> *"Even those who have knowledge they just get to the point where they don't care. There was a patient I saw who had nice fillings done on her but this time she decided to come late and when she got to a dentist all she wanted was just extraction even after I suggested root canal she refused" (dentist 6).*

4.3 Barriers to access oral health services/ to oral health service utilization

Patients mentioned various factors that lead to non-attendance and / or delays in seeking oral health services at the hospitals. Some of the individual factors included the use of traditional medicine which is close to their vicinity, fear of injection and dental procedures, as they are related to pain, lack of knowledge and education regarding oral health (which has been discussed above already), lack of finances to cater for user fees and transport, lack of perceived need for oral health services unless there is pain to name the least. Some of health system factors which were viewed as reasons for people not to attend or delay seeking oral health services were, unfriendly behaviour of oral health personnel and long queues at the dental department due to few or no oral health services near people's residents, which increases patients waiting time. All of these are discussed in some detail below.

4.3.1 Individual factors

4.3.1.1 Fear and anxiety

Fear for dental treatment which in many cases associated with pain from the procedure itself or the injection which have to be given before it. Nine out of fourteen patients stated that many people do not want to go to the dentists because of fear of pain and injection. The fracturing of teeth during extraction and associated pain was also reported to discourage patients' attendance due to prolonged pain experienced.

> *"Some people are scared of injection because it is so painful, some of them have not experience it but they are told by others people that it is very painful" (patient 2).*

> *"Some are saying they do not want to go to the dentist because when you are removing the teeth they are feeling pain and some teeth can be broken" (patient 4).*

> *"The next thing is, taking out the tooth is not an easy thing to do, it is the decision you have to make in your own heart because it hurts" (patient 10).*

> *"They are afraid of the pain of pulling the tooth, I think that's the main reason why people don't go to see the dentist" (patient 12).*

Fear for dental treatment was discussed in the Dentist, Dental Therapist and Oral Hygienist FGD and it was explained that many patients come to the dental department with fear of the unknown, resulting in having very difficult patients to treat.

> *"When patients come they have this fear of the unknown and whatever you do they are already alert and ready to react" (dentist 1).*

> *"Sometimes we are having very troublesome patients. In our African countries there is this believe some people's hands are painful others have gentle hands, so they come already with negative ideas" (dentist 2).*

> *"Some patients have fear of needles as most patients come already scared of a needle to when they see it going in the mouth they react" (dentist 3).*

4.3.1.2 Perceived need

Most of oral diseases are not very serious in the beginning and many people do not see the reason for going to the dentist unless they are in pain. Participants mention this as one of the factors which delayed dental treatment seeking. This is supported by the fact that all participants interviewed were there because of pain either on their teeth or other part of the mouth.

> *"When there is no pain then people do not take it as a problem, when we decide to come is because the pain is so severe" (patient 2).*

> *"People think that when there is no pain there is no need to go to see dentist but when they are in pain it forces them to go to the hospital" (patient 6).*

> *"If there is no pain you will not see me here, because I don't have a problem I can still continue on with everything every day without coming to the dentist" (patient 10).*

Health centre nurses mentioned the issue of people waiting for pain to visit dental department as one of the factors for delayed treatment seeking.

> ***"****They don't see dental problem is an issue, they think that the pain will go away. They don't know that if they have caries or any other disease they can go to the dental department to be helped. They will wait until they have something that they even don't know how to deal with" (health centre nurse 3).*

Most of the common oral diseases are not fatal so when people experience them it doesn't scare them and this attitude was mentioned to be one of the factors leading to nonattendance or delay seeking dental treatment by many patients. It was said that people do not care losing their teeth because they see many people without teeth in the community who are just okay. This tradition of people losing teeth could be due to lack of knowledge on the importance of having all teeth throughout life, but also due to lack of access to oral health services.

> *"People don't really care. For example if your child's teeth are not growing well people don't care to go to the doctor and ask what to do to correct the problem. People do not care they only wait when there is pain to go to see a dentist. They tend to take lightly on the problem until when the problem is big because they don't care" (patient 2).*

Oral health personnel had the same feeling regarding this issue they said that people do not care about their oral health.

> *"Most people do not care about their teeth. They see it is okay to loose teeth. Many people do not have teeth and they are still okay. There is no stigma attached to it, so it doesn't affect them psychologically. There is always the solution of them getting dentures at the end of the day. People care about diseases they feel they will get discriminate if they get them, but if that is not the case then they just don't care" (dentist 7).*

4.3.1.3 Knowledge of oral health services provided

Oral health services provided at the dental departments in the hospitals which were known by the patients included extraction, filling and cleaning of teeth, putting teeth back in position, examination of teeth or check-ups, root canal treatment, providing false teeth and treatment of diseases like sores and gum diseases. Two patients didn't know of any services offered at the dental department. But most of them (11 out of 14) knew three common services offered which are extractions, filling and cleaning of teeth

> *"Taking out teeth, Cleaning of teeth and filling of teeth" (patient 8).*

> *"Washing teeth, putting teeth in position like I did, to examine the teeth or to check that may be there is a problem and after being checked you are going to be told what to do and take out teeth" (patient 5).*

> *"They clean the teeth and they extract teeth, they do the filling and they do what and they do root canal. False teeth are done but not in all health facilities" (patient 6).*

Only one patient mentioned the examination of the mouth and the check-up visits which is very important for early detection of oral diseases and encourages early treatment seeking behaviour.

Unfortunately most of patients (11 out of 14) never heard of any oral health services provided at the community level, and for those who have heard (2 out of 14) explained that it is only done during campaigns

"they only go to the community when they are doing campaigns, they are not there full time at the community - they check the community: the mouth, teeth and they do the cleaning, they can extract" (patient 6).

It was also highlighted in the oral health personnel FGD that the community do not have enough knowledge about dental services provided in hospitals except for extraction. Many patients when they come to the dental department the only treatment they want for the rotten teeth is extraction because they are in pain and it is very difficult to convince them otherwise, especially because extraction is cheaper than fillings.

"Even educated people like medical officers don't know what we do, so how much do we expecting from a lay person" (Dentist 8).

"Patients have negative perception towards fillings "dental restorations". They say it doesn't work because sometimes the filling comes out and sometimes teeth which are filled become painful later and finally end up being taken out" (Dentist 7).

"The price of extraction is too low compared to fillings and that's why people opt for extraction rather than filling because they do not have money" (Dentist 7).

After a long discussion it was seen that even if filling price goes down, if patients do not have the knowledge on what type of services they can get from the dental department they will still come when the tooth is severely decayed and nothing can be done other than extraction.

4.3.1.4 Financial factor

Four patients mentioned the financial situation as one of the factors contributing to delay in seeking dental services and sometimes non-attendance at the dental department. Most dental services are located at the centre of the district so people who are from far places have to pay a lot of transport money as well as for the services at the hospital.

"People are not able to come to the doctor because of financial reasons. They don't have money for transport and for paying at the hospital for dental services" (patient 1).

"I think another reason could be the amount of money that people have to pay to see a doctor. They will pay there like it is 50 rands in the dentist department may be they don't have 50 rands" (patient 5).

"Some people do not have money to pay, so they will come when they have the money or they will sometimes have to borrow money to come to see the doctor" (patient 8).

"Sometimes patients want to go to the hospital for help because they are in pain but they don't have money for transport and also the money to pay at the hospital it is very difficult and we do not offer those services (health centre nurse 3).

Health centre nurses explained that when patients are referred to the hospital they always ask why the health centre doesn't provide such services because at the health centre level all services are free. One nurse further reported that even scheduled visits by dentists did not always happen.

"Even the visiting oral health personnel doesn't come often. They keep on giving us schedule but they don't come" (health centre nurses 3).

In one of the health centres which is about two hours' drive from Maseru town, the nurse explained that patients used to experience a lot of challenge when it comes to transport when referred to the hospital and most of them could not honour the referral because they couldn't afford it. At the moment there is an arrangement with one of the Non-Governmental Organization (NGO) to provide transport to all patients who need referral to Maseru and bring them back when they are done. This arrangement allowed all dental patients who come to the health centre to be able to go to the hospital, which means more oral health service utilization.

"This place is very far from Maseru and sometimes we need patients to go for dental treatment and most patients they cannot afford that and so they end up not going. But lately there is a car given to us by MCA (Millennium Challenge Account) which transport patients to Maseru and bring them back when they are done. So at least we are sure these people are getting help" (Health centre nurse 4).

Interestingly, however, according to dental staff working at the hospital access to transport had not translated into higher utilization at the time of writing this thesis.

In the FGD of oral health personnel it was discussed that due to the social economic situation most people put their financial priority on basic needs over dental treatment need.

> *"Most patients prioritize their money for other basic needs over oral health. Not everybody can afford dental services" (dentist 9)*

4.3.2 Health System Factors

4.3.2.1 Administrative factors

Poor attitude of oral health personnel and Ineffective communication

Patients reported mixed experiences of dental visits, some positive and others negative. Some patients mentioned having experienced bad attitudes and unfriendly behaviours from oral health staff, especially in terms of lack or inappropriate way of communication and bad handling of patients. These bad experiences were said to be contributing to the patients' poor attendance at the dental department and discourage patients from seeking oral health services in public hospitals

> *"Today I arrived early. It was very cold and no one cared. If people could care for patients who come to their services you will see that people will come. People get hurt and that's why they don't want to come. Today there is a problem of no injection but no one told us. If they could say there is a problem and people could wait knowing. They could even go to the radio and announce that at QEII hospital there is no injection" (patient 2).*

> *"Some people don't want to come to dental department because of services. They say when you are going to the dentist some doctors they don't treat them well" (patient 4).*

> *"Some people say some dental staff do not talk nicely to people so they are scared" (patient 8).*

> *"The way some people are talking to other person, like me this morning, I wanted to ask some dentist here when I came, but he said to me don't ask me any question. Sometimes we don't know things so we want to ask, like I was at Lesotho Defence Force(LDF) clinic yesterday. They refer me to here, so I wanted to ask the question like, where I was supposed to go and dentist say don't ask me in front of many people" (patient 7)*

"People are scared of the dental procedures, they are painful; may be the injection gets finished in the mouth and they feel pain. Or if during the extraction the tooth is broken inside it is more painful" (patient 1).

Oral health personnel in the FGD explained that due to shortage of staff and too many patients in a busy hospital like QEII, Buthabuthe and Leribe, where two dentists are expected to see between 70 to 100 patients a day, it is very difficult to have time to talk to each patient the way it is supposed to be because they are expected to finish all patients for the day. Most of these patients need procedure to be done to them especially extractions. Sometimes patients also contribute to the way oral health personnel respond to them. Another factor is the language barrier as many dentists are foreigners and they don't speak the local language and sometimes there is no one to help translate so patients feel like the dentist does not understand their problem because of the language:

"We do not have enough time due to many patients to explain the procedures we are going to do to them and what they should expect" (dentist 5).

"Patients' attitude also contribute on the way the dentist treat them, because sometimes the dentist comes to work with good mood, but you find patients with bad attitude and they make us behave the way we behave" (Dentist 1).

"When I got here yesterday the doctor told me, no I am tired so am not going to remove your tooth. Because am tired I am going to make a mistake. So he asked me if I understand or I don't. I said I understand because I know when you are tired you can make mistakes. He said just come tomorrow morning I will help you. He said the patients were many, because I was number 93, he showed me the list" (patient 9).

Oral health personnel and one health centre nurse admitted that oral health services are not up to standard and this contributes a lot to non-attendance or delay in seeking dental treatment because patients tell each other about the kind of treatment they receive.

"If a patient goes to the dental clinic and is not treated well and maybe he experienced a lot of pain he goes back to the community and spreads the word about the services, then

that community will not want to go to that clinic unless there is nothing they can do, when the pain is no more bearable" (dentist 6).

"The fact that we don't offer quality services of dental care is keeping people from going to the hospital" (health centre nurse 2)

Nurses at the health centre level, where there are no oral health services, explained that they are expected to see dental patients but they are not fully equipped with information to help them deliver those services. This results in patients not going there because nurses keep on saying they don't know how to treat dental cases. Although they see different cases of oral diseases like dental caries, swollen gums, dental abscesses, trauma, sores in the mouth, the only services they could offer is provision of medication for pain relief, oral health education and referral of patient to the hospital.

"We are not able to tell a person that this is dental caries, this is something, and this is oral cancer. We just say I don't know, but I think the doctor should know so you should go to the hospital. So if we keep such limited information the patients will not come. They will not see the importance of going there because they will say if she doesn't know here even when I go to the hospital they are going to return to me" (Health centre Nurse 1).

Dentists were described as being very slow in delivering services. Some of patients understood that dentists have a lot of things to do with one patient and ended up taking too long to attend a patient. Other participants thought dentists were very fast in seeing patients and oral health personnel handle people very well.

"The doctors are too slow. Because they give us injection and we will be waiting and waiting till the injection is no longer working" (Patient 3).

"For the man today (Dentist), he was very good to me, still consoling me, wanting to know if am not handled badly. Really he was good indeed. The other ones were very good, when I was going to wash my teeth, I was handled nicely and then I was given the tablets and pain killers after that I got better and they even encourage me many times that I should come and wash my teeth. You should always be talking well to the doctors and be open" (patient 14).

4.3.2.2 Organizational factors

(Availability of services, waiting time in the facilities and opening hours in the facilities)

Lack of oral health services at the health centre level, long queues at the dental department which lead to patients waiting for a long time and far dates of appointments given for elective services like restorations and scaling are some of the health system factors, which lead to nonattendance and delayed seeking of oral health services as mentioned by most patients.

> *"Like when I have the hole on the tooth I will visit the dentist, but If there is just stains may be I will just ignore and say I will visit the doctor later because the dentists are not that accessible. We don't have the dentist in all health facilities so we have to go far from where we live. When the tooth has a hole it will be painful and that's what I don't want because if you are wasting more time having a hole you will actually have to remove the tooth; normally people don't come to the dentist when the tooth is not painful (Patient 6).*

> *"Dental services are not everywhere in the country and so the queues are very long and after lunch they don't work" (patient 1).*

> *"We don't have many dentists in the country and there are many people who want to get the services and the dentists are not enough" (Patient 6)*

> *"People have to be early in the morning, even if it is not 8 o'clock they have to be early so that they can access the services. If not coming early they already know that they will be going back home without getting any treatment. It is not very easy, like I have said we don't have dentists in the villages, we have dentist a little bit far away. You have to take some taxis, so it won't be that very easy to go to the clinic that early" (patient 6).*

Oral health personnel FGD identified that lack of equipment, instruments and consumables as one of the health system factors which contributes to nonattendance or delayed seeking of oral health services. Patients are sent back home many times due to lack of equipment, instruments and consumables.

> *" Lack of such important equipment, instruments and material to work with frustrates patients because they keep on coming back and every time they get to the clinic they are*

told that there is no this or that; come after some weeks, and when they get back they get the same story" (dentist 7).

One patient highlighted the shortage of dental equipment and materials in the dental department being frustrating, because they are sent back without being offered services many times and sometimes they are given far appointments for treatment like filling of teeth due to many patients. The patients waiting area in the hospitals are small to fit the many patients attending for the day, which results in congestion and overcrowding.

"Even if you go inside they will give you 2 months appointment to come back for filling and you are in pain at that time, they say it is because of many patients; they don't give you service at that moment at the place at the first time. You will be given the date and the time you will have to come back two months later or three months" (patient 6).

"We don't have resources in the dental department. I remember I have been to Motebang Hospital. They said there is no electricity and the dental chair is no working. There is a lot that is not there in the dental department like material they use to fill our teeth" (patient 6).

"There are not enough what do you call these chairs, there is no equipment. May be that's the reason there are not enough dentists. I have noticed they have only two chairs in QEII and there are many patients and there are only two doctors and two nurses and there are a lot of patients there" (patient 6).

4.3.3 Cultural factor

4.3.3.1 Traditional beliefs

There is a wide use of traditional medicine or Sesotho medicine among Basotho as stated by some patients, oral health personnel and health centre nurses. Due to the problem of access to dental treatment, which are provided only at the district level and other factors, which hinder people to access dental treatment at the hospitals, patients indicated that they use home remedies and Sesotho medicine which are believed to provide pain relief or treat dental problems. As mentioned by some patients many Basotho are residing in rural area where traditions are quite powerful. For that reason many of them know which plant to get from the field to help.

"Like us as Basotho we like traditional things, so we start going to the traditional doctors and they will be giving us medicine to use. Like I personally grew up in a rural area, so when we encounter such problems we do not quickly go to the hospital. We only go to the hospital when we see that it has gone too far. We know about tradition, so we go to the field and dig our own medicine. Our adults will be telling us if you take this and mix with this and take it you will be fine. If the traditional healers have failed I go to the doctor (Patient 3).

"People won't come early because there are other medicines, like traditional medicine people will use them, and when they see that is not working, that is when they will come to the dentist" (patient 6).

"Sometimes Basotho use traditional medicine or ritual, and they say there is no need to go to the dentists because the pain will be gone" (patient 7).

"Sometimes we Basotho, we say go and take this thing and use it, that teeth will no longer be in pain so no need to go to dentist" (patient 14).

In the FGD with the Dentists, Dental Therapist and Oral Hygienist one dentist explained that traditional medicine is used widely with many Basotho especially in the rural areas, and these medicines help them to actually take out the teeth.

"I met a patient of around 70 years at the clinic, who had most of his teeth, removed by traditional medicine. The patient explained that it was the first time to come to the dentist, and only because that particular tooth didn't want to come out. The dentist explained that there are some traditional medicines, which when put on the tooth for some time they uproot the whole tooth. It takes just a week from the time one start putting medicine till when the tooth is completely uprooted" (Dentist 4).

One health centre nurse from one clinic mentioned that most patients start with traditional herbs before going to the hospital for help because they do not have money to go to the hospital. Her views were that these remedies actually do not work because they all end up coming to the hospital for assistance.

"One of the things that hinder them to go to the dentist is the use of home remedies. Sometimes they use herbs, they gargle to control pain and they will say that they are fine, they use their remedies at home. But after sometimes they will come again, with the same problems. They will just say that they do not have money and turn to home remedies which do not help them" (Health Centre nurse 1).

The most commonly home remedies used or mentioned by patients are some plant based traditional remedies, concentrated green tea, gauze with methylated spirit, locally applied toothpaste and warm salty water. But with the use of all the mentioned remedies it was still perceived by most patients that the toothache always finally comes back. The uses of these remedies were helping in relief of pain although just temporary. Most of them mentioned that at the end they will consult professional oral health personnel for proper management.

"If it is paining may be I will take a pill or I will take a something, may be a toothpaste like I am doing, putting a toothpaste in my mouth and the pain goes down. I sometimes also use green tea; somebody says it helps when you make it strong and then you put it in the mouth for some time. Others, they say that you put something like herbal or Sesotho medicine" (*Patient 12).*

4.3 Suggested approaches to improve oral health services

Different groups of people interviewed and the FGD of oral health personnel came up with various approaches that could be implemented to improve oral health services.

Patients' approaches suggested were more focused on the increasing knowledge of the community on oral health, because most of them mentioned that they have never heard of any community oral health services. They suggested oral health education on oral diseases prevention and the right time to seek oral health services and communication at the hospital level.

"People want to listen to people who know what they are talking about, so dental staff should go to the community and give services needed at that level. Basotho don't like reading but listening, so distributing leaflets or pamphlets sometimes does not help; so dentist must go out and talk to people" (patient 2).

"Like in every hospital in the district they give health talk on many things every day. It's high time they include oral health talks" (Patient 12).

Oral Health personnel FGD came up with the shortcomings of the present oral health services which could be contributing to the lack of utilization of oral health services in the country. They included shortage of oral health personnel, poorly equipped surgeries, lack of maintenance plans which lead to frequent non-functional dental equipment, lack of media coverage when it comes to oral health issues.

Furthermore, the majority of the dentists in the current program do not speak Sesotho and that hinders proper service delivery.

The program doesn't have full control when it comes to procurement of dental equipment, instruments and consumables, and Oral Health Program is doing a lot of work at the community but is not able to assess the impact. The suggested approaches to improve oral health services were:

"Bringing the service close to people by expanding oral health services to the health centre level where it is needed most. That will need recruitment of oral health personnel suitable for that level, planning on infrastructure including dental equipment, instruments and consumables. While waiting for the bigger step to be taken outreach services should be strengthened and health centre nurses trained on how to diagnose, manage simple cases and refer difficult ones. Oral Health material should be included in the school curriculum starting at preschool to tertiary level of education, including teachers training college. Oral health education should be given to all other health professionals in hospitals. Salary should be reviewed for dentist to match the workload" (Joint feedback from FDG).

Health centre nurses are expected to deliver oral health services due to lack of oral health personnel at that level. All of the four visited Health centre nurses mentioned lack of information and skills to be able to deliver oral health services. Visiting oral health personnel do not follow a schedule, which results in booked patients waiting for too long before they get services. Suggested approaches to improve oral health services and hence utilization were as follows:

- *"Training of the Health centre nurses on oral health issues and equipping them with skills to be able to diagnose oral diseases, manage simple cases and refer difficult cases to the hospital.*
- *Have visiting oral health personnel with a schedule of visits, so that patients can be told in advance.*
- *Provision of oral health treatment guidelines to help them when seeing patient,*
- *Provision of IEC material.*
- *Have regular supervision from oral health personnel.*
- *Strengthening outreach services to include oral health information, and finally*
- *Deploy permanent oral health personnel at the health centre level" (Health centre nurses)*

4.5 Conclusion

The result of this study showed that patient had good general knowledge on the common oral disease being dental caries and gum diseases but a bit low on the causes of dental caries which is the most common in Lesotho. Most patients knew how to prevent dental caries and gum disease by brushing teeth but only a small percentage knew about prevention of dental caries by avoiding eating sugary foods and regular dental visits. The most common barrier to utilization of oral health services in the country were fear and anxiety, low perceived need for dental treatment unless there are symptoms such as pain and emergency, financial situation as one of the factors contributing to delay seeking of dental services and sometimes non-attendance to dental department. Although most patients knew three common services offered in the dental clinics being extractions, filling and cleaning of teeth, most people were said to opt for extraction because it is cheaper than fillings.

CHAPTER 5: DISCUSSION

5.1 introduction

Utilization of oral health services and its barriers is an important parameter in oral health planning. This is because it provides useful information and guidance to health planners and policy makers on the need of the community to ensure the provision of effective health care services through developing appropriate structures and appropriate resource allocation. This study was aiming at understanding the factors influencing oral health service utilization in the country (Jain et al, 2013). This was done through exploring individual, socio economic, cultural and health system factors impacting on the utilization of dental services through engagement with patients attending the dental department in Queen Elizabeth II hospital as well as oral health care providers and health centre nurses.

In summary the results of this study showed that patients' knowledge of basic oral health issues was mixed, but on average not bad. The common factors mentioned by patients that lead to non-attendance and /or delay in seeking oral health services included individual factors such as lack of perceived need for oral health services unless there is pain, fear for injection and dental procedures, knowledge of oral health in general and of the services provided and lack of finance. The health system factors mentioned were poor communication and attitudes of oral health personnel, long queues in the hospital, which led to long waiting time and far dates for appointments as a result of shortage of dentists, dental equipment and consumables. Despite the country's mountainous terrain patients did not mention geographical factors as barriers to utilization of oral health services, except for a health centre nurse from a remote health centre who mentioned problems of transport and distance to the nearest oral health services as a barrier to utilization. The fact that geographical access did not feature more prominently could be due to the fact that all patients were interviewed at the QEII hospital, which is situated at in the capital Maseru, and thus may have been from surrounding areas.

Under socio-economic factors, although there was difference in levels of income, education and occupation among participants this did not represent any obvious barrier to utilization of oral health services. Although cultural factors were not part of the conceptual framework they emerge

as an important factor from the patient's interviews, focusing on use of traditional medicine and home remedies, so will be included in the discussion below.

5.2 General knowledge on oral health

Knowledge of oral diseases and more importantly about the fact that most of these diseases are to a large extent preventable is a major vehicle for improving the oral health. It is generally accepted that good oral health knowledge is one of the important preconditions of good oral health behavior (Abiola et al, 2011). Oral health knowledge is considered to be an essential prerequisite for health-related practices including utilization of oral health services.

The result of this study showed that patients had knowledge that the common oral diseases are dental caries and gum diseases. However, more than half of the participants didn't know the cause of dental caries. This shows that there is limited knowledge of the causes of oral disease especially dental caries, which is the most common oral disease in Lesotho. The international literature presents a mixed picture of patient's knowledge of oral diseases. For example, two studies of school teachers in India and secondary school children in Tanzania showed that both groups had good knowledge regarding causes, prevention, and signs of dental caries and periodontal diseases (Carneiro et al, 2011). The difference in this study could lie in the difference in study populations studied: lay patients may have lower oral health knowledge compared to secondary school students due to may be socio economic status. Other studies done in Nigeria in hospital settings showed results similar to the present study, finding moderate knowledge of common oral diseases (Sarumathi et al, 2013, Abiola et al, 2011).

While knowledge of oral diseases in this study was limited, we found a number of myths about the causes of caries and other diseases. For example, there is a common belief in the community that dental caries is caused by a certain worm found in the teeth. Clearly this is one area where health education is required, because it is important people to understand the causes of dental caries.

Oral diseases are largely preventable. The challenge is to create the opportunity and conditions to enable individuals and communities to enjoy good oral health. However, in several countries, a considerable proportion of people have limited knowledge of the causes of oral disease and the

methods of prevention (Mangalore et al, 2013). In our study knowledge on prevention of oral diseases varied as some patients knew that brushing teeth thoroughly prevents cavities, but only a small percentage knew that one form of prevention of dental caries is to avoid eating sugary foods. The international studies consulted again showed that patients with generally higher levels of education than our study participants (for example university students in Ethiopia and teachers and students in India) had greater knowledge of preventive measure of gum diseases and caries (Darout, 2014; Reddy et al, 2014; Raj et al, 2011).

Visiting the dentist for routine check-up as a preventive measure of common oral diseases, however, was not well known, both in this study and the consulted literature. In the present study only a quarter of patients mentioned it as a measure of oral disease prevention, which is similar to a study conducted in India where the people interviewed said they had never visited a dentist for routine oral examination (Devaraj & Eswar, 2012).

Poor preventive knowledge and practices observed in a present study could be due to the fact that the country is having a big challenge of oral public health personnel who could facilitate communicating information on preventive measures. Media programs are also limited. This results in community not being well informed about preventive measures. The lack of access to information aggravates other access barriers as will be discussed later on.

5.3 Barrier to access oral health services/ to oral health service utilization

Results of this study showed that patients have a fair knowledge about oral health but this is not translated into practices of prevention or seeking early treatment. In this section questions will be answered regarding the reasons for such behaviour. General knowledge on oral health is very important when it comes to utilization of oral health services but knowledge by itself is not enough because there are other important factors which contribute a health related behaviour and utilization. In this study these factors are grouped as individual, health system and social economic factors.

5.3.1 Individual factors affecting utilization of oral health services

5.3.1.1 *Fear and anxiety*

More than half of the patients interviewed asserted that many people do not want to go to the dentists because of fear of pain from procedure and injection. They further specified extraction and injection as the dental procedure associated with fear – most likely because extraction is a painful procedure and is the most common treatment rendered in dental clinics so have been experienced with many people. Fear of visiting dental clinic was reported in FGD by oral health personnel in the present study explaining that patients come to the clinic already expecting to experience pain during the procedure. This association of dental fear and anxiety with less frequent dental visits have been found in many other studies (Al-Omari & Al-Omiri, 2009; Ter Horst & de Wit, 1993). Dentists have been associated with pain due to the procedure they carry out which are often painful. All this results in patients' avoidance for dental visits. Similar results have been found in both high- and low-income settings. In Australia, for example, a study found the common factors for not using dental services among adults was the fear of dentists (Mariño et al, 2014). Another study with similar results was done in Nigeria where fear was observed as the major barrier to oral health care utilization among the studied population with fear of dental injection constituted the barrier with highest ranking among the patients in this study (Ajayi & Arigbede, 2012). These results are also supported by a study done in India which revealed that fear of dentists or dental tools were the major barriers for seeking oral health care (Kadaluru et al, 2012). People with high dental fear are much more likely to delay or avoid dental visiting, and a number of fearful people regularly cancel or fail to show for appointments, thus setting up a vicious cycle of fear, treatment avoidance and painful treatment due to late presentation.

Furthermore, in most cases patients who experience fear and anxiety due to procedure and instruments are very difficult to treat. The FGD with oral health personnel in the present study confirmed the view expressed by interviewed patients that fear of injection and procedures lead to complications in treatment. People with high dental fear may prove difficult to treat, require more time, and present with behavioural problems which can result in a stressful and unpleasant experience for both the patient and treating dental practitioner (Armfield &Heaton, 2013). Again, research in other countries and settings reports similar findings (Obeidat et al, 2014, Quteish Taani, 2002, Poudyal et al, 2010).

Treating patients with dental fear or anxiety is a big challenge for oral health personnel. Different approaches have been suggested to try and address this challenge. These include rapport and good communication between the dental practitioner and patient, providing patients with information about procedures such as what sensations can be expected and the anticipated length of treatment, using 'tell-show-do' technique which involves an explanation of what is about to happen, what instruments will be used and the reasons for this (the 'tell' phase), followed by a demonstration of the procedure (the 'show' phase). The 'do' phase is then initiated by carrying out the procedure (Armfield, & Heaton, 2013). While Tell-Show-Do is considered to be effective in children, a version of this technique was also found to be very helpful for adult patients who suffer from dental fear. Dentist Fraser Hendrie explained that the variant that he favours most for adults is more Explain-Ask-Show-Do which aims at putting the patient back in control of the situation and it has shown to work well in managing anxiety in adult patients (Hendrie, n/d).

In a low resource setting countries like Lesotho where patients' workload is huge in the dental departments due to low numbers of oral health personnel and few health centres providing oral health services, such time consuming approaches may prove difficult to be implemented and therefore impact on the oral health service utilization.

Rapport and communication between the dentist and patient technique has also proven successful in reducing fear and anxiety in patients as reported in studies where it was found that patient satisfaction was associated, in part, with the rapport patients felt with their dentists and that dentists' understanding and acceptance of patients' needs and concerns were more important (for example, Liddell et al, 1990). The control of dental anxiety and fear might also be aided via good dental health education, regular dental visits, good patient dentist relationship and suitable communication with the patients, thus returning to the importance of knowledge and better oral health education as discussed above.

5.3.1.2 Perceived need

In this study all patients interviewed were at the hospital because they were experiencing pain, and they generally indicated that a reason for seeking dental care would be pain. As mentioned above, they didn't know the importance of regular visits to the dentist. This understanding of need is common internationally, as seen in studies in India, South Africa, and elsewhere in the

world (Devaraj & Eswar, 2012; Poudyal et al, 2010; Fotedar et al, 2013; Gupta et al, 2014; Ukeje et al, 2000; Al-Shammari et al, 2007; Kiyak & Reichmuth, 2005; Eigbobo & Obiajunwa, 2016; Ogunrinde et al, 2015). Sometimes perceive need does not translate into people using oral health services. In one study done in South Africa it was found that even though perceived oral care need was generally high this did not necessarily translate to an expressed need that would ultimately result in the utilization of oral health services mainly due to the belief that oral health care costs were unaffordable and that there was inadequate transport available. (Molete et al, 2014). In the present study, although most participants understood that it is important to regularly visit a dentist but they didn't put that knowledge into practice mainly due to other factors like fear and perceived need, so they waited until when there is pain.

5.3.1.3 Knowledge of oral health services provided

Knowledge of services provided in the dental clinics is related to utilization of oral health services. Lack of knowledge about the services at one's disposal can act as a barrier to the use of health services. In the present study most patients interviewed (11 out of 14) knew three common services offered in the dental clinics in the country, which are extractions, filling and cleaning of teeth. This is supported by a study where majority (72.8%) of the respondents were well informed about dental health care and services. This knowledge was found to increase with higher levels of income and education, and was linked to a positive attitude towards a regular utilization (Osuh et al, 2014). Unfortunately these inferences could not be drawn in the present study, because the eleven patients who knew about the services offered were of different levels of education.

Although some patients knew the three services offered their preferred treatment option was always extraction. In the FGD with oral health personnel in the present study it was highlighted that many patients even if convinced otherwise opt for extraction as a treatment probably mainly due to late seeking of dental treatment and may be limited knowledge about the range of dental services provided in hospitals. This was also seen in a studies in Nigeria where tooth extraction accounted for the majority of treatments offered with reasons that it could have been due to the fact that tooth extraction is a simpler option, and most of the patients presented at the late symptomatic stage of caries sequelae or periodontal disease opt for it (Okeigbemen & Nnawuihe, 2015; Akpata, 2004; Anyanechi & Chukwuneke, 2012; Adeyemo et al, 2008). Another reason

which was discussed in FGD to contribute for many patients opting for extraction was because it is relatively cheaper than fillings. A study from Australia reported same finding among Aboriginal people where dental visits often resulted in tooth extraction, a cheaper option than tooth restoration according to some participants (Durey et al, 2016).

It was also discussed that sometimes dentists are forced to do extraction due to two reasons; the workload which doesn't allow them to carry out many long procedures like restorations or nonfunctional equipment or shortage of consumables.

5.3.2 Health system factors affecting utilization of oral health services

5.3.2.1 Poor attitude of oral health personnel and Ineffective communication

Essential elements of good communication involve establishing an effective two way interaction, genuinely acknowledging (rather than dismissing) patient concerns, attending to non-verbal cues, effective listening and accurate reflection of what the patient says, demonstrating empathy, and using appropriate voice and tone. In particular patients want a dentist who listens to them, have a friendly caring attitude, explain treatment options and procedures, and inspire confidence (Sbaraini et al, 2012). Effective interpersonal communication between health care provider and client is one of the most important elements for improving client satisfaction, compliance and health outcomes (Negri et al, n/d; Gunn & Karin, 2006; Baseer et al, 2012). But literature also shows that poor attitudes of dental personnel are not unusual, and have been associated with increase fear and anxiety to patients (see, for example, WHO, 2010, which stated that in dental clinics poor attitude of oral health personnel could affect individual factors by creating fear and anxiety in dental patients and affect utilization of health services). This is supported by the study, which was conducted to assess public attitude toward dentists and dental services in India, where the author stated that public attitudes towards dentists and dental services determine whether people seek dental care (Ravindranath & Manikyam, 2014).

In the present study patients reported mixed experiences of dental visits, some positive and others negative. Some patients mentioned having experienced bad attitudes and unfriendly behaviours from oral health staff and others experienced lack of or inappropriate way of communication. Patients were explicit about the fact that such bad experiences were contributing

to the patients' poor attendance of the dental department and discouraging patients from seeking oral health services in especially public hospitals. Other patients reported from their experience that generally oral health personnel handle people very well.

Oral health personnel in FGD stated that due to a shortage of oral health staff combined with high workloads it in very difficult for them to have time to talk to each patient thoroughly and explain the procedure. In this situation services given are aiming at processing patients fast. This scenario has been reported in another study although in low percentage, where about 14.2% of the respondents stated that dentists did not spend enough time to understand their problems (Ravindranath & Manikyam, 2014).

Another health system factor, which emerged from the study, is the language barrier, as many dentists in Lesotho are foreigners, who don't speak the local language, and sometimes there is no one to help translate. This leads to patients feeling that the dentists do not understand their problem and at the same time missing some important information from the dentist because of the language. The problem of ineffective communication caused by language difficulties often stays unsolved, leading to frustration and irritation with patients feeling neglected and detached (Sbaraini et al, 2012).

5.3.2.2 Availability of services and waiting time in the facilities

The amount of time a patient waits to be seen by a health profession is one factor which affects the utilization of health care services and patients perceive long waiting times as barriers to actually obtaining services. In the present study patients mentioned long queues at the dental department which lead to patients waiting for a long time. Limited number of health facilities providing oral health services, shortage of oral health personnel, language barrier are factors which contribute significantly to the long waiting time in all hospitals, and on top of that a lot of time is used for translation purposes to patients and dentist respectively. Administrative procedures like registrations and lack of signs or personnel to provide instructions to patients movements contributed as well to long waiting time. Similar factors were found in a study from Nigeria by Oche & Adamu, 2013 where it was reported that the three most common factors leading to long waiting time were high patient load, few doctors and record clerks.

Another health system factor that leads to nonattendance and delayed seeking of oral health services was distant dates of appointments given for elective services like restorations and scaling. This factor was again attributed to shortage of oral health personnel and large number of patients, as well as lack of equipment, instruments and frequent dental consumables stock outs as stated by oral health personnel in FGD. Non-functional and shortage of dental equipment, instruments and materials in the dental department frustrates patients because they keep on being sent home without offered services until when they decide not to attend anymore. This can be supported by studies done in Malaysia where it was found that late appointment and long waiting time were important barriers that prevent access to oral health care services among the antenatal mothers (Saddki et al, 2010) and another one done in Hong Kong by Hung (2011) where it was found that the long waiting time required to get an appointment within the public system caused much annoyance and having to book an appointment for a few months later also increases the chance of forgetting or not bothering to attend.

Patients and health centre nurse in the present study also complained about unavailability of oral health services due to lack of oral health services at the health centre level as one of the health system factor which lead to nonattendance and delayed seeking of oral health services. It was explained that patients had to travel far distance to obtain those services at the district hospitals and due to economic challenges many patients end up not going to the hospital as they can't afford transport fair, user fees and accommodation in case they can't go back the same day. This shows that there is a need to strengthen outreach services and equip health centre nurse to be able to carry out simple management of oral diseases. Having no access to the oral health services and transportation was also found to be an important factor which affected the utilization of oral health services by Gupta et al, (2014). This was also observed in a study by Kakatkar et al (2011) where the distance a person had to travel to get dental care was found to influence the visits. Again in a study by Durey et al, (2016) barriers to good oral health and dental care were identified by Aboriginal people as long waiting times and distance to services especially for those living in remote areas.

To combat the problem of shortage of oral health staff in the under-resourced countries, the use of non-oral health care workers in the promotion of oral health can contribute substantially to improving oral health, and the adoption of a multidisciplinary team approach in oral health is

highly recommended (Walid et al, 2004). The oral health program in Lesotho considered the use of other health care workers to deliver basic oral health services like provision of oral health education, diagnose and manage simple dental cases. Health centre nurses were considered to be the most suitable cadres of health care workers to take on this role at the health centre level and were found to have positive attitudes towards the provision of oral health education and oral hygiene practices (Walid et al, 2004). However, attention is needed to make sure these nurses are equipped with necessary knowledge to help them carry out the functions expected by the program. In the present study the health centre nurses expressed their concern about lacking knowledge on provision of oral health education and how to diagnose and manage simple dental cases. For this reason Walid et al, (2004) recommended the inclusion of oral health in the nursing curriculum, with more clinical hands-on training in oral examination and diagnosis of oral diseases, which could be a good starting point.

We have shown that there is a link between individual factors, socioeconomic factors and health system factors as seen here where transportation and financial factors can affect accessibility to oral health service while at the same time fear and anxiety about dental procedure can contribute to patients not going to hospital before symptoms become severe. Furthermore, there are a number of cultural factors, including traditional treatment options, which impact on the utilization of formal health services, which are discussed below.

5.3.2.3 Financial cost/income

The cost of dental treatment has consistently remained a barrier for utilization of oral health services (White 2012; Ajayi et al, 2012). In fact, Freeman, (1999) stated that statistics throughout the world show that peoples' ability to access regular dental care is directly related to their annual income. Many studies done in different parts of the world showed high cost (user fees) of dental treatment being as one of the major barriers to dental utilization as patients could not afford it (Osuh et al, 2014; Kadaluru et al, 2012; Kikwilu et al, 2008; Molete et al, 2014; Okeigbemen & Nnawuihe, 2015; Singh et al, 2015). Dental treatment obtained on pay for service basis was considered as a barrier compared to the one offered under insurance and subsidy scheme, as seen in a study done in Nigeria by Aikins & Braimoh, (2015).

In the present study some the patients and health centre nurses mentioned the financial situation as one of the factors contributing to delay seeking of dental services and sometimes nonattendance to dental department. Transport fare and user fees were highlighted as the main financial factors encountered. Lack of dental clinics in health centres forces people to pay a lot of money for transport to get dental services at the hospitals which are located in the centre of the district. User fee for dental treatment is subsidized by the government but due to economic status many people are not able to afford even small user fees for dental services. In the face of global economy downturn particularly in a developing country like Lesotho, it is not surprising that the cost of dental treatment is of much concern.

Because out of pocket expenditures has been seen to hinder oral service utilization it has been suggested in the literature that the availability of payment schemes can help increased access to and utilization of dental services (Ahlberg et al, 1996).

Removal of financial barriers would facilitate prompt visit to dentists to treat dental problems as seen in a study by Fotedar et al, (2013) where financial reasons were not considered as a barrier by respondents, probably because dental care was provided free of charge here or at a minimal cost through government health services.

5.3.3 Cultural factors

5.3.3.1 Traditional beliefs

The use of medicinal plants for curing oral health problems was a major contributor for not utilizing available dental services by people in the present study. There is a wide use of traditional medicine or Sesotho medicine to treat oral diseases among Basotho. Patients, oral health personnel and health centre nurses reported that these practices have been there for many generations as parents pass them on to their young ones. Due to the problem of access to dental treatment, which is provided only at the district level, and other factors which hinders people to access dental treatment at the hospitals, patients use home remedies and Sesotho medicine which are believed to provide pain relief or treat dental problems.

Self-medication and use of herbal medicines and homemade remedies seems to be a common practice in rural areas of most developing countries (Gupta et al, 2014). For example, a study

done in India found that total of 114 plant species were identified which were used by people to relieve toothache, used as toothbrush, mouthwash/gargle, and treat gum disorders. All these practices were seen as major barrier towards utilization of dental care services by those people (Gambhir et al, 2013).

Factors like poverty, inadequacy of health services, shortage of health workers, and rampant shortage of drugs and equipment in existing health facilities were also reported to make traditional medicine an important component of healthcare in Africa (Agbonr &Naidoo, 2015). It was acknowledged that traditional medicine is the most affordable and accessible system of healthcare for the majority of the African rural population. Another factor identified by Agbor and Naidoo (2015) is the perception that traditional healers understand their problems better. In a study done in rural Sri Lanka the reasons for using traditional medicine were due to cultural beliefs and lack of confidence in western type dental care, which were a bit different from the above mentioned reasons (Nanayakkara & Ekanayake, 2008)

In the present study many patients mentioned lack of access to oral health services, trust and easy access of traditional medicine, lack of money to go to the hospital and access to over the counter pain killers as reasons for using traditional medicine and home remedies. Only when self-care remedies fail, they change from a coping strategy to an active formal care-seeking phase.

Traditional home remedies to relieve oral and periodontal problems have been common and different types have been used in different parts of the world. In the present study the common home remedies mentioned by patients included concentrated green tea, painkillers like panado, gauze with methylated spirit, locally applied toothpaste and warm salty water. The practice of using home remedies has also been seen in African Americans communities where cotton balls soaked in an aspirin solution or alcohol to relieve pain and swelling was used (Norman et al, 1986). In the study by Gholami et al (2012) there was a mention of using baking soda dissolved in water for gargling to prevent gum infection or boiled sumac to relieve gum problems at the same time application of salt dissolved in water was also among the home remedies to cure gum pain, swelling, bleeding, and looseness (Gholami et al, 2012). This was also seen in the study by Durey et al (2016) where possible, participants managed their own dental pain with analgesia and avoided dental visits partly from fear their teeth would be extracted.

5.4 Limitations

Firstly, using dental patients who were seeking oral health services as primary study population posed as a limitation on the length of interview, as in hospital settings it was difficult to have more than 30 minutes interview with a patient against recommended time of 40 to 60 minutes per participant. Few patients (3) who were randomly selected were not willing to go through the interview because they were in a hurry to go home and rest. Again there was a possibility of having selection bias due to the fact that people interviewed were at the hospital and so utilizing oral health services which may skew data in particular direction. In the future studies, all these limitations could be minimized by using a different study population other than patients Secondly, because the researcher is an oral health worker, working with oral health programme she tended to have her own assumptions about factors affecting utilization of oral health services so care was taken to ensure that this was minimised. However reflexivity assisted in limiting bias as noted above.

Since the study was hospital based and employed deliberate sampling, the results cannot be generalized at the community level. Given the size of the study it cannot be generalized to hospital settings elsewhere. This is a study that just gives useful insights in the particular setting

6. CONCLUSION

In the beginning of the study the author drew a conceptual framework focusing on what she thought were the important factors affecting utilization of oral health services. The results of the study give the opportunity to re-think the conceptual framework in line with the findings. Individual factors which emerged from interviews included knowledge of oral health services and services provided in the dental clinics, perceived need, fear and anxiety, and access to oral health services. Health system factors included attitude of oral health personnel, ineffective communication, availability of services, waiting time in the facilities and financial cost. Under socio economic factors, although there were differences in levels of education, occupation and income among participants it did not show any obvious relationship as a barrier to utilization of oral health. Cultural factor especially on use of traditional medicine, although not part of the conceptual framework, emerged as one of the important factor in utilization of oral health services. Self-medication and use of traditional medicines and homemade remedies to treat oral diseases continue to be a common practice in Lesotho. The three groups involved in the study reported that these practices have been there for many generations as parents pass them on to their young ones.

The results showed that the most important factors which emerged from the interviews and contribute to the barrier of oral health service utilization were perceived to be need, fear and anxiety, long waiting time due to high workload and lack of oral health services in health centres. Financial factor, lack of equipment, instruments and consumables, personnel attitude and ineffective communication and far dates of appointment were less important factors emerged from the interviews.

7. RECOMMENDATIONS

1. Due to the shortage of community oral health personnel the program together with health education department should strengthen the use of media for extensive oral health education on prevention of oral diseases and the right time to seek oral health services to cover many people so that people can make informed decision.
2. Due to lack of oral health personnel in health centres, nurses in the health centres are expected to provide oral health education, diagnose and manage simple dental cases; therefore the oral health program should prepare guidelines on how to go about training and supervisions to help them carry out these functions.
3. At the moment most outreach visits focus only on oral health education and screening of oral diseases, neglecting oral disease management due to lack of mobile dental units caused by procurement logistics at the district level. The Oral Health Program together with procurement department should come up with a procurement plan to cater for these items from central level.
4. Inclusion of oral health material in the school curriculum from preschool to tertiary level especially in teachers training college to make sure teachers are more comfortable to teach students oral health material. This could be done by working together with Ministry of Education.
5. To reduce issue of stock outs of dental consumables, shortage of dental instruments and equipment the oral health program should put in place a system which monitors usage of consumables and standardization of the dental units and other equipment in all district hospitals, together with a proper maintenance plan.
6. The oral health program should facilitate resource mobilization to carrying out research for evidence-based planning

8. REFERENCES

Abiola A, Olayinka A, Mathilda B, Ogunbiyi O , Modupe S and Olubunmi O (2011). A Survey of the Oral Health Knowledge and Practices of Pregnant Women in a Nigerian Teaching Hospital. African Journal of Reproductive Health 15(4).

Abraham D, Bronkhorst EM, Truin GJ, Felling A, and Severens JL (2003). How Dental Utilization in The Netherlands Was Affected By a Radical Reform of the Dental Insurance System. Community Dent Health 20:34–9.

Academy of general dentistry, (2012). Barriers and Solutions to Accessing Care "to serve and protect the oral health of the public".

Adeyemo WL, Oderinu HO, Oluseye SB, Taiwo OA, Akinwande JA (2008). Indications for extraction of permanent teeth in a Nigerian teaching hospital: A 16-year follow-up study. Nig Q J Hosp Med ;18:128–32. [PubMed: 19062474]

Agbor AM and Azodo CC (2011), "Self medication for oral health problems in Cameroon," International Dental Journal 61;4:204–209.

Agbor AM, Naidoo S, and Mbia MA (2011). "The Role Of Traditional Healers in Tooth Extractions in Lekie Division, Cameroon," Journal of Ethnobiology and Ethnomedicine 7;15.

Agbor MA and Naidoo S (2011). Knowledge and practice of traditional healers in oral health in the Bui Division, Cameroon. Journal of Ethnobiology and Ethnomedicine 7:6.

Agbor MA and Naidoo S (2015). Ethnomedicinal Plants Used by Traditional Healers to Treat Oral Health Problems in Cameroon Evidence-Based Complementary and Alternative Medicine Article ID 649832, 10 pages

Ahlberg, J., Tuominen, R et al. (1996). "Dental knowledge, attitudes towards oral health care and utilization of dental services among male industrial workers with or without an employer-provided dental benefit scheme" Community Dent Oral Epidemiol **24**(6): 380-384.

Aikins EA and Braimoh OB (2015). Utilization of dental services among civil servants in Port Harcourt, Nigeria. J Dent Res Rev 2:62-6. [Downloaded free from http://www.jdrr.org on Saturday, March 12, 2016, IP: 41.191.203.2].

Ajayi DM1 and Arigbede AO (2012). Barriers to oral health care utilization in Ibadan, South West Nigeria. African Health Sciences 20 (4): 507 - 513 http://dx.doi.org/10.4314/ahs.v12i4.17.

Akpata E (2004). Oral health in Nigeria. Int Dent J ;54(Suppl 1):361–6. [PubMed: 15631097]

Albandar JM, Rams TE (2002). Risk factors for periodontitis in children and young persons. Periodontology 2000. 29(1):207-22.

Albandar JM, Tinoco E (2002). Global epidemiology of periodontal diseases in children and young persons. Periodontology 2000. 29(1):153-76.

Al-Habashneh R, Guthmiller JM, Levy S, Johnson GK, Squier C, Dawson DV, Fang Q (2005): Factors related to utilization of dental services during pregnancy. J Clin Periodontol 32:815-821.

Al-Omari WM, and Al-Omiri MK (2009). Dental anxiety among University students and its correlation with their field of study. J Appl Oral Sci. 17(3): 199-203.

Al-Shammari KF, Al-Ansari JM, Al-Khabbaz AK and Honkala S (2007). Barriers to seeking preventive dental care by Kuwaiti adults. Med Princ Pract 16:413-419.

Al-Swuailem A, Fahad S. Al-Jamal B, Mohammad F.H (2014). Treatment Perception Andutilization Of Dental Services During Pregnancy Among Sampled Women In Riyadh, Saudi Arabia. The Saudi Journal for Dental Research 5, 123–129

Anyanechi C, Chukwuneke F (2012). Survey of the reasons for dental extraction in Eastern Nigeria. Ann Med Health Sci Res; 2:129–33. [PMCID: PMC3573506] [PubMed: 23440287]

Armfield JM and Heaton LJ (2013). Management of fear and anxiety in the dental clinic: a review. Australian Dental Journal 58: 390–407

Awadia AK, Birkeland J, Haugejorden O, Bjorvatn K (2002). Caries experience and caries predictors-a study of Tanzanian children consuming drinking water with different fluoride concentrations. Clinical Oral Investigations 6(2):98-103.

Baseer MA, Alenazy MS, AlAsqah M, AlGabbani M and Mehkari A (2012). Oral health knowledge, attitude and practices among health professionals in King Fahad Medical City, Riyadh. Dent Res J (Isfahan) 9(4): 386–392.

Bayat F (2010). Impact of Dental Insurance on Adults' Oral Health Care in Tehran, Iran. [Academic dissertation]. Finland: University of Helsinki

Bendall D, and Asubonteng P (1995). The effect of dental insurance on the demand for dental services in the USA: a review. J Manag Med 9:55-68.

Braun, V. and Clarke, V. (2006) Using thematic analysis in psychology. Qualitative Research in Psychology, 3 (2):77-101. ISSN 1478-0887 Available from: http://eprints.uwe.ac.uk/11735

Bureau of Statistics (2009) . Population by age and sex in Lesotho. 2006 population and housing census.

Cappelli, D. & Mobley, C (2008). Prevention in Clinical Oral Health Care (1st Edition). Mosby Print

Carneiro L, Kabulwa M, Makyao,M Mrosso G, and Choum R (2011). Oral Health Knowledge and Practices of Secondary School Students, Tanga, Tanzania. International Journal of Dentistry, Article ID806258, 6pages.

Christensen L, W.H. VAN Palenstein Helderman (no date). Reasons for Patient's Delay And Effect Of Treatment And Advice On The Utilisation Of Dental Care Services By Factory Workers In A Developing Country. Odonto-Stomatologie Tropicale.

Cleaton-Jones P, Fatti P (1999). Dental caries trends in Africa. Community Dentistry and Oral Epidemiology 27(5):316-20.

Cleaton-Jones P, Fatti P, Bonecker M (2006). Dental caries trends in 5- to 6-year-old and 11- to 13-year-old children in three UNICEF designated regions--Sub Saharan Africa, Middle East and North Africa, Latin America and Caribbean: 1970-2004. Int Dent J. 56(5):294-300. Epub 2006/10/31.

Darout I A (2014). Knowledge and behavior related to oral health among Jimma University Health Sciences students, Jimma, Ethiopia. European Journal of General Dentistry 3; 3.

Devaraj CG and Eswar P (2012). Reasons for Use and Non-Use of Dental Services among People Visiting a Dental College Hospital in India: A descriptive cross-sectional study Eur J Dent 6:422-427.

Durey A, McAullay D, Gibson B and Slack-Smith L (2016). Aboriginal Health Worker Perceptions of Oral Health: A Qualitative Study in Perth, Western Australia. Durey et al. International Journal for Equity in Health 15:4

Eigbobo JO and Obiajunwa CC (2016). Utilization of dental services among secondary school students in Port Harcourt, Nigeria. Eur J Gen Dent 5:74-9.

FDI (2015). The Challenge of Oral Disease – A call for global action. The Oral Health Atlas. 2nd ed. Geneva: FDI World Dental Federation;

Fotedar, S., Sharma, KR., Bhardwaj, V., & Sogi, GM. (2013). Barriers to the Utilization of Dental Services in Shimla, India. *Eur J Gen Dent* 2:139-43.

Freeman R (1999). Barriers to Accessing dental Care: Patient Factors British Dental Journal, 187; 3.

Gambhir RS, Brar P, Singh G, Sofat A, and Kakar H (2013). Utilization of dental care: An Indian outlook. J Nat Sci Biol Med 4(2): 292–297.

Gholami M, Pakdaman A and Virtanen J.I (2012). Common Perceptions of Periodontal Health and Illness among Adults: A Qualitative Study. International Scholarly Research Network ISRN Dentistry Article ID 671879, 6 pages doi:10.5402/2012/671879

Goncagul G and Ayaz E (2010), "Antimicrobial Effect of Garlic (Allium Sativum) and Traditional Medicine," Journal of Animal and Veterinary Advances 9;1:1–4.

Guay AH (2004). Access to Dental Care Solving The Problem For Underserved Populations JADA, 135.

Gunn L, Karin C (2006). Experiences of oral health care among immigrants from Iran and Iraq living in Sweden. International Journal of Qualitative Studies on Health and Well-being 1: 120-127

Gupta S, Ranjan V, Rai S, Mathur H, Solanki J, and Koppula SK (2014). Oral health services utilization among the rural population of western Rajasthan, India. J Indian Acad Oral Med Radiol 26:410-3.

Hendrie F (n/d).Direct Interaction based on Tell-Show-Do Techniques. Dental Fear Central - the world's biggest Dental Phobia, Dental Fear and Dental Anxiety Resource! http://www.dentalfearcentral.org/

Hollist NO (2004), A Collection of Traditional Yoruba Oral and Dental Medicaments, Book Binders, Ibadan, Nigeria.

Hung, W. [洪詠瓊]. (2011). A systematic review of qualitative studies on the barriers to and facilitators of adult dental service use. (Thesis). University of Hong Kong, Pokfulam, Hong Kong SAR. Retrieved from http://dx.doi.org/10.5353/th_b4693751

Institute of medicine, Public Policy Options for better Dental Health. Chapter 2: Need for Dental Treatment and Utilization of Services. National Academic Press, 1980

Jain A, Bhaskar D.J ,Agali RC and Gupta V (2013a). Barrier to Oral Health Care Delivery System in India. Heal Talk 5: 3.

Jain V K, Sequeira. P, Jain. J, Chancy U, Maliyil MJ and Bhagwandas SC (2013). Barriers in Utilization of Oral Health Care Services Among Patients Attending Primary and Community Health Centres in Virajpet, South Karnataka. Natl J Med Dent Res 1(3) : 39-47.

Kadaluru UG, Kempraj VM, Muddaiah P (2012). Utilization of oral health care services among adults attending community outreach programs. Indian J Dent Res 23:841-2

Kakatkar, G., Bhat, N., Nagarajappa, R., Prasad, V., Sharda, A., Asawa, K. Agrawal, A. (2011). Barriers to the Utilization of Dental Services in Udaipur, India. *Journal of Dentistry, Tehran University of Medical Sciences, Tehran, Iran.* 8:2.

Kaplan, S. H., Greenfield, S., and Ware, J. E. (1989). Assessing the effects of physician-patient interactions on the outcomes of chronic disease. Med Care, 27:S110-S127.

Kayombo EJ, Uiso FC, Mbwambo ZH, Mahunnah RL, Moshi MJ, and Mgonda YH (2007): Experience of initiating collaboration of TH in managing HIV and Aids in Tanzania. J Ethnobio Ethnomed 3:6.

Khatoon FK, Reddy BK and Guvva S (2016). Reducing Patient Waiting Time in Dental Clinic According to Treatment Type. Int J Com Health and Med Res 2(4):3-8

Kikwilu, E.N., Masalu, J.R. et al. (2008). "Prevalence of oral pain and barriers to use of emergency oral care facilities among adult Tanzanians" BMC Oral Health **8**: 28.

Kiyak HA and Reichmuth M (2005). Barriers to and enablers of older adults' use of dental services. J Dent Educ 69:975-986.

Kronfol NM (2012). Access and Barriers To Health Care Delivery In Arab Countries: a review Eastern Mediterranean Health Journal. EMHJ 18 (12):1239-1246.

Lee W, Kim S-J, Albert JM and Nelson S (2014). Community factors predicting dental utilization among older adults. J Am Dent Assoc. 145(2): 150–158.

Liddell A, Ackerman C, & Locker D (1990). What dental phobics say about their dental experiences. J Can Dent Assoc ; 56:863–866.

Lo E.C.M., Lin H.C., Wan Z.J. and Wong M.C.M (2001). Utilization of Dental Services in Southern China. JDentRes 80(5):1471-1474

Locker D, and Leake JL (1993). Inequities in health: dental insurance coverage and use of dental services among older Ontario adults. Can J Public Health 84:139-140.

Loewenson , R. , Laurell , AC. , Hogstedt , C. , D'Ambruoso , L. & Shroff , Z. (2014). Participatory action research in health systems: a methods reader. Harare: Regional Network for Equity in Health in East and Southern Africa (EQUINET) in association with Training and Research Support Centre (TARSC), Alliance for Health Policy and Systems Research (AHPSR), World Health Organization (WHO) and the International Development Research Centre (IDRC) Canada.

Lydon-Rochelle MT, Krakowiak P, Hujoel PP, and Peters RM (2004). Dental care use and self-reported dental problems in relation to pregnancy. Am J Public Health 94:765-771.

Mangalore S, Venkata PK, Basavantappa JS and Preetha S (2013). Knowledge about prevention of oral cancer and gum disease among school teachers in Dharwad, India. Indian J Dent Res 24:279-83. Available from: http://www.ijdr.in/text.asp?2013/24/3/279/117986

Marcenes, W Kassebaum, N.J. & Bernabé, E , Flaxman, A., Naghavi, M., Lopez A and Murray C.J.L. (2013). Global Burden of Oral Conditions in 1990-2010: A Systematic Analysis. J Dent Res 92(7):592-597

Mariño R, Khan A, Tham R, Khew CW and Stevenson C (2014): Pattern and factors associated with utilization of dental services among older adults in rural Victoria. Aust Dent J in press.

Mashoto K, Astrom A, Skeie M, Masalu J (2010). Socio-demographic disparity in oral health among the poor: a cross sectional study of early adolescents in Kilwa district, Tanzania. BMC Oral Health 10(1):7.

Mashoto KO ,Åstrøm AN ,David J and Masalu JR (2009). Dental pain, oral impacts and perceived need for dental treatment in Tanzanian school students: a cross-sectional study. Health and Quality of Life Outcomes 7:73.

Mickenautsch, S., Frencken, J.E. and Van't Hof, M. (2007). Factors inhibiting the implementation of the atramautic restorative treatment approach in public oral health services In Gauteng Province, South Africa. J Appl Oral Sci 15(1):1-8.

Ministry of Health (2015) Oral Health Policy Draft

Ministry of Health (2016) Oral Clinical report (Unpublished report)

Ministry of Health Lesotho (2012). Dental caries survey in 12 year olds Primary School Children. (Unpublished report)

Ministry of Health, Lesotho (2009/10). Annual Joint Review Report (unpublished report).

Ministry of Health, Lesotho (2010/11). Annual Joint Review Report (unpublished report).

Ministry of Health, Lesotho (2011/12). Annual Joint Review Report (unpublished report).

Ministry of Health, Lesotho (2012/13). Annual Joint Review Report (unpublished report).

Ministry of Health, Lesotho (2013/14). Annual Joint Review Report (unpublished report).

Molete MP, Yengopal V, and Moorman J (2014). Oral health needs and barriers to accessing care among the elderly in Johannesburg. SADJ, 69:8 p352 - p357.

Moynihan P and Petersen PE (2004). Diet, nutrition and the prevention of dental diseases. Public Health Nutrition: 7(1A), 201–226

MP Molete, V Yengopal, and J Moorman (2014). Oral Health Needs and Barriers to Accessing Care among the Elderly in Johannesburg. SADJ 69; 8: 352 - p357.

Nanayakkara V, and Ekanayake L (2008). Use Of Traditional Medicine For Oral Conditions In Rural Sri Lanka. Int Dent J 58(2):86-90.

Nannozi MJ (2013). Reducing Patients' Waiting Time In Mengo Hospital Dental Clinic. Medium-term Fellowship Program. Makerere University School of Public Health.

Negri B and Brown LD, Hernández O, Rosenbaum J and Roter D (no year). Improving Interpersonal Communication between Health Care Providers and Clients. Quality Assurance Methodology Refinement Series.

Ngilisho LAF ,Mosha HJ, and Poulsen, S (1994). "The role of traditional healers in the treatment of toothache in Tanga Region, Tanzania," Community Dental Health 11; 4: 240–242.

Norman BJ, Robinson E, and Razzoog ME (1986). "Societal Determinants of Cultural Factors Related to the Dental Health of a Selected Older Black Population," Special Care in Dentistry 6;3:120–123. View at Google Scholar · View at Scopus

Obeidat S.R, Alsa'di A.G and Taani D.S (2014). Factors influencing dental care access in Jordanian adults BMC Oral Health 14:127

Oche M and Adamu H (2013). Determinants of Patient Waiting Time in the General Outpatient Department of a Tertiary Health Institution in North Western Nigeria. Annals of Medical and Health Sciences Research ;3(4):588-592.

Ogunrinde TJ, Oyewole OE, and Dosumu OO (2015). Dental Care Knowledge and Practices Among Secondary School Adolescents in Ibadan North Local Government Areas of Oyo State, Nigeria. European J Gen Dent 4:68-73.

Okeigbemen SA and Nnawuihe CU (2015). Oral Health Trends And Service Utilization At A Rural Outreach Dental Clinic, Udo, Southern Nigeria. J Int Soc Prev Community Dent 5:2 S118–S122.

Okullo ANA I, and Haugejorden O (2004). Social inequalities in oral health and in use of oral health care services among adolescents in Uganda. International Journal of Paediatric Dentistry. (14):326–35.

Okullo I ANA, Haugejorden O and Rwenyonyi CM (2003). Variation in caries experience and sugar intake among secondary school students in urban and rural Uganda. Acta Odontologica Scandinavica ;61(4):197-202.

Olaleye A.O, Suleiman I K, Solomon S (2013). Pattern of Dental Treatment in Patients attending the Dental Centre University Of Maiduguri Teaching Hospital, Maiduguri Nigeria. Bo Med J ;10 (1):12-19

Olusile A.O, Adeniyi A.A and Orebanjo. O (2014). Self-rated oral health status, oral health service utilization, and oral hygiene practices among adult Nigerians. BMC Oral Health 14:140

Oral Cancer Facts – Oral Cancer Facts foundation (2015) https://oralcancerfoundation.org/facts/

Osuh M.E, Oke G.A and Asuzu M.C (2014). Dental Services and Attitudes towards Its Regular Utilization Among Civil Servants In Ibadan, Nigeria. Ann Ibd. Pg. Med 12 (1) 7-14

Petersen PE (2009) Oral health in the developing world Global Oral Health Programme Chronic Disease and Health Promotion. Geneva – Switzerland. Global Health Education Consortium and collaborating partners

Petersen, PE. (2003). The World Oral Health Report. Continuous Improvement of Oral Health in the 21st century - the approach of the WHO Global Oral Health Programme. WHO, Geneva.

Petersen, PE., Bourgeois, D., Ogawa, H., Estupinan-Day, S., & Ndiaye, C. (2005). The Global Burden of Oral Diseases and Risks To Oral Health. *Bulletin of the World Health Organization* 2005; 83: 661-6.

Poudyal S, Roa A, Shenoy R and Priya H (2010): Utilization of dental services in field practice area in Mangalore, Karnataka. Indian J Community Med 35:424–425.

Quteish Taani DS (2002): Dental anxiety and regularity of dental attendance in younger adults. J Oral Rehabil : 29:604–608.

Raj S M, VV P K, and B J S (2011). Factors Affecting The Knowledge On Prevention Of Oral Diseases Among School Teachers Of Dharwad City, A Survey From India. WebmedCentral Dentistry 2(2):WMC001618.

Ravindranath NS, and Manikyam A (2014). Public Attitude towards Dentists and Dental Services in Bangalore City, India. Journal of Indian Association of Public Health Dentistry 12;2.

Reddy V, Bennadi D, Gaduputi S, Kshetrimayum N, Siluvai S and Reddy CVK (2014). Oral health related knowledge, attitude, and practice among the pre-university students of Mysore city. J Int Soc Prev Community Dent 4(3): 154–158.

Robson, C. (2011). Real World Research. Melbourne: Chichester: Wiley.

Saddki N, Yusoff A, and Hwang Y (2010). Factors Associated with Dental Visit and Barriers To Utilization of Oral Health Care Services in a Sample Of Antenatal Mothers In Hospital Universiti Sains Malaysia. BMC Public Health 10:75

Sarumathi T, Saravanakumar B, Datta M and Nagarathnam T (2013). Awareness and Knowledge of Common Oral Diseases among Primary Care Physicians. Journal of Clinical and Diagnostic Research 7(4): 768-771.

Sbaraini A, Carter SM, Evans RW and Blinkhorn A (2012). Experiences of dental care: what do patients value? BMC Health Services Research 12:177

Scheppers E, Dongen E, Dekker J, Geertzend J and Dekker J (2006). Potential barriers to the use of health services among ethnic minorities: a review Family Practice 23: 325–348.

Sharda AJ and Shetty S (2008). A Comparative Study of Oral Health Knowledge, Attitude and Behavior of First and Final Year Dental Students of Udaipur City, Rajasthan. J Oral Health Comm Dent 2(3):46-54

Singh S, Shah V, Dagrus K, Manjunatha B, Kariya PB, and Shah S (2015). Oral Health Inequality and Barriers to Oral Health Care In India. EJDTR 4(1), 242-245

Slack–Smith L, and Hyndman J (2004). The Relationship between Demographic and Health–Related Factors on Dental Service Attendance by Older Australians. Br Dent J 197:193–9.

Smyth E, Caamaño F and Fernández-Riveiro P (2007). Oral health knowledge, attitudes and practice in 12-year-old schoolchildren. Med. oral patol. oral cir.bucal (Internet) 12; 8.

Sohn W, and Ismail AI (2005). Regular dental visits and dental anxiety in an adult dentate population. J Am Dent Assoc 136:58-66.

Sourabha KG, Puranik MP, Uma SR, Biradar A, and Puttaswamy B (2015). Barriers in Utilization of Dental Services among Human Immunodeficiency Virus Patients. International Journal of Advanced Health Sciences 2; 3.

Stewart,M.,Brown,J.B.,Donner,A.,McWhinney,I. R.,Oates,J.,Weston,W.W.,&Jordan,J.(2000). The impact of patient-centered care on outcomes. J Fam.Pract., 49, 796-804.

Stoyanova AP (2004). Equity and Utilization of Primary, Specialist and Dental Health Services in Spain [Academic dissertation]. Barcelona: Universitat de Barcelona.

Suominen-Taipale AL (2000). Demand for Oral Health Services in Adults Finns [Academic dissertation].Turku: University of Turku.

Sur H, Hayran O, Yildirim C, and Mumcu G (2004). Patient satisfaction in dental outpatient clinics in Turkey. Croat Med J 45:651-654.

Takondwa M, Kariisa E, Doherty J, Hoohlo-Khotle N, Kiwanuka-Mukiibi P and Williamson T (2010). Lesotho Health Systems Assessment. Bethesda, MD: Health Systems 20/20, Abt Associates Inc.

Ter Horst G, de Wit CA (1993). Review of behavioral research in dentistry 1987-1992: dental anxiety, dentist-patient relationship, compliance and attendance. Int Dent J ;43:265-78.

Thorpe, S. (2006). Oral Health Issues in the African Region: Current Situation and Future Perspectives. *Journal of Dental Education, 70 (11).*

Ukeje CN, Agbelusi GA, and Jeboda SO (2000). Presenting Complaints of Patients At The Oral Diagnosis Clinic of The Lagos University Teaching Hospital (LUTH). Nig Q J Hosp Med 10:121‑5.

Varenne, B., Petersen, PE., & Ouattara, S. (2006). Oral Health Behaviour of Children and Adults in Urban and Rural Areas of Burkina Faso, Africa. *International Dental Journal* 56: 61-70

Varenne, B., Petersen, PE., Fournet, F., Msellati, P., Gary, J., Ouattara, S., Harang, M. & Salem, G. (2006). Illness-Related Behaviour and Utilization of Oral Health Services Among Adult City-

Dwellers in Burkina Faso: evidence from a household survey. *BMC Health Services Research* 6:164.

Vashisth, S., Gupta, N., Bansal, M., & Rao, NC. (2012). Utilization of Services Rendered in Dental Outreach Programs in Rural Areas of Haryana. Contemporary Clinical Dentistry ; 3 Supplement.

Walid E, Nasir EF and Naidoo S (2004). Oral health knowledge, attitudes and behavior among nursing staff in Lesotho. SADJ 59(7):288, 290, 292.

Wambua JM, Mbayaki R, Munyao PM, Kabue MH, Mulindi R, Change PM, Ikamati R, Jahonga R, Ambalu R, Maranga M and Mudany M, (2015),"Client Satisfaction Determinants in Four Kenyan Slums", International Journal of Health Care Quality Assurance, Vol. 28 Iss 7 pp. 667 – 677 Permanent link to this document: http://dx.doi.org/10.1108/IJHCQA-12-2014-0110

White, AB. (2012). Factors Influencing Demand for Dental Services: Population, Demographics, Disease, Insurance. *Journal of Dental Education* .76: 8.

WHO (World Health Organization) 2010. Oral health. http://www.who.int/topics/oral_health/en/

Woolfolk MW, Lang WP, Borgnakke WS et al (1999). Determining Dental Checkups Frequency. J Am Dent Assoc 130:715723.

World Health Organization (2002): Traditional medicine strategy 2002-2005. World Health Organization Geneva: World Health Organization; 2002, WHO/EDM/TRM/2002.1

World Health Organization (2015) Oral Health Services, Priority Action Areas. http://www.who.int/oral_health/action/services/en/

Yousif, M.A.E.R and Miskeen, E. (2009). Dental health services in Gezira locality, Sudan. Sudanese Journal of Public Health, 4(3): 325 – 330.

9. APPENDICES

9.1 APPENDIX I: Information Sheet

UNIVERSITY OF THE WESTERN CAPE

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Tel: +27 21-959 2809 Fax: 27 21-959 2872

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INFORMATION SHEET

Project Title: *Factors influencing utilization of Oral Health Services in Lesotho*

What is this study about?

This is a research project being conducted by Dr Navoneiwa Linjewile-Marealle doing a Masters programme in Public Health at the University of the Western Cape. We are inviting you to participate in this research project because Lesotho has been experiencing a high number of patients attending dental clinic countrywide with tooth decay. Most of these patients present at the dental clinic when the disease is at the advance stage that no other treatment can be provided except for extraction of teeth for pain relieve purposes. There are other oral health services which could be provided for such condition to be able to serve the teeth but because of the advance stage of the disease the only option is extraction. You *as a member of the community who utilize oral health services in the country so you are very important to give information regarding the matter. At the moment no one knows the* reasons as why people don't go to the dentists for services other than pain relieve therefore the purpose of this research project is to explore and describe the barriers to utilization of oral health services in the country and the gathered information will be used to inform policy makers at the central level to strategically plan intervention that will improve the utilization of oral health service.

What will I be asked to do if I agree to participate?

Patients

If you agree to participate the researcher will take you to a private room identified within the hospital for the interview. The researcher will be asking questions which will guide in getting the information needed. The interview will be in the in the language you understand. The questions will focus on the reasons why people do not come to the dental clinic for other services like routine checkup but wait until when there is pain. For those who come for other services what made them to come, what are the reasons which make people come to a dentist only when in pain. This interview may take about 15 to 20 minutes. Because the researcher is not a Mosotho (although fluent in Sesotho) there will be an extra person in the room to help with language when needed. If you agree, there will also be an audio recording to make sure that no information is missed.

Health centre nurses

If you agree to participate the researcher will interview you on your experience and opinion regarding utilization of oral health services in health centres

Dentists

If you agree to participate then research will take place in the form of focus group discussion where the researcher will present the results from the interview with patients and discussion will focus on how similar or different it is in your setting and experience

Would my participation in this study be kept confidential?

The researchers undertake to protect your identity and the nature of your contribution. To ensure your anonymity, the researcher will use identification key and *through the use of an identification key, the researcher will be able to link your survey to your identity and only the researcher will have access to the identification.*

To ensure your confidentiality, all the data collected will be kept under locked filing cabinet in the office of the researcher. If we write a report or article about this research project, your identity will be protected.

Dentist

This study will use focus groups therefore the extent to which your identity will remain confidential is dependent on participants' in the Focus Group maintaining confidentiality.

What are the risks of this research?

There may be some risks from participating in this research study as all human interactions and talking about self or others carry some amount of risks. You may feel uncomfortable in terms of fear, embarrassment or fatigue. We will nevertheless minimize such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?

This research is not designed to help you personally, but the results will help the researcher learn more about factors that contribute in the utilization of oral services in the country which can be used for panning purposes. We hope that, in the future, other people might benefit from this study through improved understanding of these factors and better planning of oral services.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

What if I have questions?

This research is being conducted by *Dr Navoneiwa Linjewile-Marealle from School of Public Health* at the University of the Western Cape, working with the Ministry of Health in Maseru,

Lesotho. If you have any questions about the research study itself, please contact Dr Navoneiwa Linjewile-Marealle at: Ministry of Health Headquarters, Box 514, Maseru 100, Lesotho or using telephone numbers (+266 58773682 or +266 63086110 or using email address nlmarealle@gmail.com

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

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This research has been approved by the University of the Western Cape's Senate Research Committee. (REFERENCE NUMBER: _____

9.2 APPENDIX Ib: Information Sheet Sesotho

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 2809 Fax: 27 21-959 2872

E-mail: soph-comm@uwc.ac.za

Project Title: *Mabaka a susumetsang ts'ebeliso ea lits'ebeletso tsa bophelo (ba meno le mahano) ka har'a Lesotho*

Patlisiso ee e bua kang?

Hona ke research project e tsamaisoang ke Dr Navoneiwa Linjewile-Marealle; moithuti oa University of the Western Cape a ithutelang lengolo la Masters in Public Health. Re o memela ho nka karolo ho research project ena hoba mehleng ena palo ea bakuli ba isang ho bola hoa meno likliniking/ngakeng Lesotho e hloa mekoalaba (e ntse nyoloha). Bongata ba bakuli bana bo itlaleha kliniking (ea meno) bokuli bona bose bo totile hoo pheko ee e qetelle esele ho motsula/chomola meno ho bobisa/fokotsa bohloko. Ho ntso na le mekhoa e meng ea ho phekola bokuli bona ntle le ho motsula meno, empa pheko ee e qetelle ele ho motsula meno hoba bokuli boo be se bo anetse. Ho nka karolo hoa hao projekeng ena ho bohlokoa haholo hoba U setho sa sechaba se sebelisang ts'ebeletso tsa bophelo bo botle ba meno le lehano tse fumanehang likliniking Lesotho. Ha joale, ha hona ea tsebang mabaka a khannelang batho ho se ee ngakeng ea meno holo fumana ts'ebeletso tse ling ntle le ho qoqola/motsula meno. Ke ka lona lebaka lena leo sepheho sa projeke ena eleng ho batlisisa le ho hlalosa mabaka a thibelang batho ho sebelisa lits'ebeletso tsena tsa bophelo tse anetseng naha, 'me tsebo etla utulloa ke projeke ena etlo sebelisoa ho eletsa bo-ketsa molao hore ba khone ho rera mekhoa etla eketsa ts'ebeliso ea ts'ebeletso tsena tsa bophelo sechabeng.

Ketlo botsoa potso life hake nka karolo projekeng ee?

Bakuli

Ha u nkile qeto ea ho nka karolo projekeng ena, u tla biletsoa interview phaposing ea lekunutu sepetlele. Interview ena etla tsoela pele ka puo eo oena ule mokuli u e utloisisang (Sesotho). Tse ling tsa lipotso tseo utla li botsoa li mabapi le mabaka a etsang hore batho base ee likliniking/ngakeng ea meno holo etsa check-up ea meno nako le nako, empa ba emela ho ea likliniking ha bohloko bo maino bo se bo totile. Hoba tlelang ts'ebeletso tsena kliniking ho tla batlisisoa na sesosa sa hore ba ee likliniking ke se feng le hore na mabaka a etsang hore batho ba tle kliniking ha ho se ho opa ke afe. Interview ena e nka metsotso e leshome le metso e mehlano (15) ho isa ho mashome a mabeli (20). Ho tla ba le motho oa boraro oa Mosotho ka phaposing ea interview ho toloka litaba tsa ralipatlisiso ho mokuli moo ho hlokehang hoba ralipatlisiso ha se Mosotho (empa Sesotho oa se bua ralipatlisiso). Ebang u lumetse ho nka karolo, interview etla hatisoa lebanteng (rekotoa) ho etsa bonnete ba hore ha hona litaba tse tlolisoang mahlo.

Ma-nurse a litsi tsa bophelo

Ha u nkile qeto ea ho nka karolo projekeng ena, ralipatlisiso o tla botsisisa ka tsebo ea hao le maikutlo a hao ka taba tsa ts'ebeliso ea lits'ebeletso tsa bophelo ka har'a naha.

Ngaka tsa meno

Ha u nkile qeto ea ho nka karolo projekeng ena, utla tsebisoa hore projeke ena etla etsoa ka mokhoa oa ho qoqa le ralipatlisiso ka sephetho se fumanoeng ho tsoa ho bakuli 'me ntlha-kholo mona ele ho leka ho fumana na ebe mabaka a ts'etlehoang ke bakuli a hose sebelise lits'ebeletso tsa bophelo a ts'oana hakae le mabaka a ts'etlehoang ke ngaka tsa meno.

Na ebe ho tla utulloa boitsebiso baka ha ke nkile karolo projekeng ee?

Bo-ralipatlisiso ba ikana ho ts'ireletsa seriti sa ba nkang karolo projekeng ka hore mabitso a bona ase phatlalatsoe. Ralipatlisiso otla sebelisa linomoro ho ts'oaea batho 'me o tla sebelisa tsona linomoro tsena (eseng mabitso a batho) haa ntsa tsoela pele ka li-interview, 'me ke ena feela ralipatlisiso atla tseba mabitso a batho ba nkileng karolo.

Ho boloka boitsebiso ba batho ele sephiri, tsebo eohle e tla fumanoa projekeng ena etlo notlelloa ofising ea ralipatlisiso. Ha ho ka etsahala hore ho ngoloe report ka projeke ena, tseba hore boitsebiso ba batho le mabitso akase sebelisoe hohang!

Ngaka ea meno

Projeke ena etla etsoa ka ho sebelisa maquloana a lingaka ‘me boitsebiso ba batho bo ka phatlalatsoa haeba lequloana le ikhethela hore mabitso a bona a sebelisoe.

Ebe kotsi ke li feng tsa ho nka karolo projekeng ee?

Hona le kotsi tse ntseng li ka hlaha ha motho a nkile karolo projekeng ena joalokaha hole joalo ka mehla moo ho nang le lipuisano ka batho. Ho ntso ka etsahala hore u khoebethoe ke letsoalo kapa u hlajoe ke lihlong hao ntso nka karolo projekeng ena. Empa khoba mats’oafo hoba retla leka ka hohle ho kokobetsa matsoalo a hao ha interview e ntse tsoela pele ‘me retla lula re u mametse leha u hloka ho phomola hanyane ka nako ea interview hot la ba joalo. Ebang hoka hlokahala, litsibi li ka bitsoa ho u thusa nakong ea interview.

Ebe nka una melemo efe projekeng ee?

Patlisiso ena ha ea etsetsoa ho thusa oena bomong ba hao, empa sephetho se tla thus abo-ralipatlisiso ho ithuta ka mabaka a etsang hore sechaba se se sebelise ts’ebeletso tsa bophelo. Re ts’epa hore ka moso batho ba bang ba ka una molemo ho tsoa ho projeke ena ka hore bat la be se ba utloisisa mabaka a sistisang bath oho se ee likliniking hape ba tsebe ho itherela k abo-bona ho sebelisa lits’ebeletso tsena tsa bophelo.

Ke hloka hoba karolo ea patlisiso ee? Nka ikhula nako eohle hake batla?

Ho nka karolo hoa hao projekeng ena ke boithaopo; ha oa tlameha. U ntso ka khetha hose ikamahanye le projeke ena hao batla. Hao nkile qeto ea ho nka karolo, le teng u ntso ka ikhula nako efe kappa efe hao utloa u batla ha interview entse tsoela pele. Ebang u lakatsa ho ikhula projelkeng ena neng le neng, haho bolele hore utla lahla menyetla eo loketseng hohang!

Ha eba ke na le lipotso?

Lipatlisiso tsena li tsamaisoa ke *Dr Navoneiwa Linjewile-Marealle* oa *School of Public Health* ka University of the Western Cape, ‘me o sebetsa Lekala la Bophelo (Ministry of Health) Maseru, Lesotho. Ebang u na le lipotso ka patlisiso/projeke ena, uka kopana le Dr Navoneiwa

Linjewile-Marealle ho: Ministry of Health Headquarters, Box 514, Maseru 100, Lesotho. Untso ka sebelisa nomoro ea mohala eleng 58773682 kapa 63086110, haele marang-rang teng u ka sebelisa email address ena: nlmarealle@gmail.com

Ebang u ka ba le lipotso tsa projeke ena leho batlisisa ka litokelo tsa hao ule emong a nkang karolo kappa u batla ho tlaleha mathata a tlisoang ke projeke ena, u ka tlaleha taba tsena ho:

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Patlisiso ena e lumelletsoe ke University of the Western Cape's Senate Research Committee. (REFERENCE NUMBER: _____

9.3 APPENDIX II: Consent Form

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 2809 Fax: 27 21-959 2872

E-mail: soph-comm@uwc.ac.za

CONSENT FORM

Title of Research Project: Factors influencing utilization of Oral Health Services in Lesotho

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.

Participant's name……..

Participant's signature…….

Date……

9.4 APPENDIX IIb: Consent Form

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 2809 Fax: 27 21-959 2872

E-mail: soph-comm@uwc.ac.za

TUMELLO EA HO NKA KAROLO BOITHUTONG BONA

Sehlooho: Mabaka a sitisang batho ho sebelisa litsi tsa Bophelo ba lehano Lesotho

Ke hlaloselitsoe lintlha tsohle tsa boithuto bona ka puo eo ke etloisisang. Lipotso tsohle tseo ke neng kena letsona malebana le buithuto bona li arabetsoe. Kea utloisisisa hore ho nka karolo hoa ka ho bolelang ‘me ke etsa sena ka boithaopo, ke sa qobelloe. Ke tiiselitsoe hore mabitso le boitsibiso ba ka, ha bona hlahella ‘me kena le tokelo eohle ea ho ikhula, neng kapa neng, ha ke se ke sa thabele ho nka karolo boithutong bona ke sa fane ka mabaka a ho etsa joalo.

Lebitso la Moithaopi……..

Boitekeno ba Moithaopi…….

Letsatsi la tekeno……

9.5 APPENDIX III: Questions Intended to Guide in-Depth Interview with Patients

1. Have you been to dentist before or this is your first visit?
2. What do you do when you have any problem or discomfort in your mouth?
3. What is the best thing to do when one has a dental problem?
4. What reasons could lead you not to visit a dentist even when you are in need of the services?
5. What reasons could lead anyone you know not to visit a dentist even though they needed such services?
6. Is there any family member you know who had oral problem and needed oral health services and did not get it? If yes what were the reasons?
7. What is your experience with dental visits and services provided by dental personnel?
8. What are the dental services provided at the dental clinic and outside the clinic?
9. What causes dental problems and how can you prevent them?

9.6 APPENDIX IV: Questions to Guide In-Depth Interview with Health Centre Nurses

1. Do you see any dental cases in your clinic?
2. What kind of dental problem do these dental patients come with to the clinic?
3. What experience do you have with the dental patients? (how regularly do you see them and are there patients who need services and not able to get them)
4. What type of dental service does your clinic offer to the community?
5. What are your view regarding oral health services?

9.7 APPENDIX V: Questions Intended To Guide FGD of Dentists

1. What kind of dental problems do you see in your clinics?
2. What experience do you have with the dental patients?
3. What type of dental service does your clinic offer to the community?
4. Do you think that people know the type of services the department offers? If yes how do you know?
5. What is your experience with dental patients' health seeking behaviour?
6. What could be the problems which hinder patients seeking oral health services?
7. What factors do you think contribute to the oral health service utilization from both patients and service providers' side?
8. Can we discuss on what could be done to improve utilization of oral health services utilization?
9. What are the shortcomings of the present oral health services in the country which could contribute to the problem?