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Perceived Barriers to Oral Health Care Access for Massachusetts' Underserved Parents

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Walden University
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Abstract

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MD, Caribbean Medical University, 2018

MPH, Walden University, 2012

BS, University of Massachusetts - Boston, 2007

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Poor oral care is detrimental to the overall health of the population. In the United States, oral health diseases affect millions of individuals, especially children and adolescents. Guided by the health belief model, the purpose of this study was to identify parents' perceived barriers to oral health care access among their 5- to 10-year-old children. A phenomenological approach was used to gather data and thematically analyze interview data from 20 parents who were recruited from a health center in the northeastern United States. All participants had at least one child between 5-10 years old and all identified as under-served. Data were coded and analyzed for emerging themes, with the assistance of Nvivo software. The findings demonstrated that lack of time, the location of dental facilities, and the lack of sensitivity of dental providers were issues for parents in managing their children's oral health. This study might be beneficial in eliciting positive social change at the individual and organizational levels by illuminating the constraints faced by the underserved population in Massachusetts.

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Dedication

This dissertation is dedicated to my God, my Stronghold and my Rock, who gave me the intelligence, perseverance and endurance to see this project through. To Him be the Glory! I also dedicate this project to my wonderful husband, Jean Emmanuel Brutus, whose love, support and encouragement go beyond understanding. To my son Caiden Rhys E Cenafils-Brutus, born in the midst of this journey. Your smile always cheered me up, even during the stressful moments.

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Chapter 1: Introduction to the Study

Introduction

Oral health is not only related to having healthy teeth but is also associated with better general health and quality of life (Nourijelyani, et al, 2014). It is also an essential element in the general health of infants and children as it impacts their health outcomes and quality of life (Mani, Aziz, John & Ismail, 2010). Worldwide, oral diseases constitute a major public health problem. The main oral health problem includes dental caries, which is chronic in nature (de Oliveira, et al, 2013). Dental caries often leads to toothache and at a later stage tooth loss (de Oliveira, et al, 2013). Nevertheless, it is highly avoidable, should proper oral health measures are taken. Early prevention of oral health diseases through dental visits is important in improving children's oral health, especially in those with greater risk of dental caries (Divaris, et al, 2014).

Background of the Problem

The impact of poor oral care is detrimental to the overall health of the population (Obeng, 2008). This greatly increases the concerns of public health professionals in regard to reducing health issues in order to promote health (Jones, et al, 2013). In developing countries, the prevalence of dental caries is significant among adults and in about 60% of school-aged children (Nourijelyani, et al, 2014). Although dental caries levels have declined, early childhood caries still persists in many areas, particularly the segments of society that are socially deprived, which means that these segments are in poverty, or include those with low socioeconomic status, poor education or lack of social support (Mani, et al, 2010).

Among the health care needs among U.S. children, dental care is the most prevalent one, particularly among the disadvantaged minority children of low-income families with limited or no access to health care (Kandel, Richards & Binkley, 2012). In the United States, oral health diseases, such as dental caries and periodontal diseases, are affecting millions of individuals, especially children and adolescents (Franchi & Bumgardner, 2013). Approximately one third of citizens do not have access to primary or even basic preventive oral health care services (Shaefer & Miller, 2011). This is largely due to the high cost of care as well as the unequal distribution of oral care providers (Shaefer & Miller, 2011).

Consistent with the 2000 Surgeon General's Report proposed by the U.S. Department of Health and Human Services, the most common chronic childhood disease is dental caries, which is five times more common than asthma (Obeng, 2008). The impact of oral disease is extensive. Each year, over 51 million schools hours are lost due to oral illnesses (Obeng, 2008). This is disproportionately influenced by oral health disparities (The Office of Oral Health, 2009). Such disparities are mostly seen among children with low-income families, who miss more school days than children of average-income families (Pourat & Finocchio, 2010). Also, in 25% of families living below the poverty level, epidemiologic surveillance data revealed that between 2009 and 2010, approximately 14% of children aged 3-5 years had untreated dental caries (Divaris, et al, 2014).

This problem is also seen in the state of Massachusetts, particularly among the underserved population. This population is faced with the challenge of accessing health

care, which is especially problematic for children. Yet, research on the barriers to oral health care in underserved children is scarce in this state, though several actions to reduce health disparities are in place. Therefore, research in this area is relevant since it can help shed more light on the issue and help bring about appropriate interventions.

Statement of the Problem

A wider gap in children's oral health with greater dental disease consequence for the underserved segment of the U.S. population is a result of disparities in access to oral care services (The Office of Oral Health, 2009). The most common disparities in the children population that are often reported include the age, sex, race/ethnicity, availability of dental insurance and availability, and diversity of oral health care providers (American Dental Hygienists' Association, 2006). An estimate of 17 million low-income children between the ages of one and 18 go without dental care each year **(**Franchi & Bumgardner, 2013). Obeng (2008) stated that poor children tend to be 12 times more restricted in their access to activities than those from higher-income families, due to oral health related diseases. Such children often report pain and suffering from untreated oral conditions leading to difficulty eating, speaking, and even in learning ability (Obeng, 2008).

Additionally, according to Pourat and Finocchio (2010), Latino and African American children using Medicaid experience high rates of tooth decay and visit dentists less often that those that are privately insured. As opposed to their Caucasian counterparts, those with Medicaid or without insurance have longer intervals between dental visits (Pourat & Finocchio, 2010). Furthermore, parental perceptions of oral health can impact the quality of life of children. Indeed, the oral health quality of children in

their preschool-age is negatively affected by their caregivers experience and understanding of dental disease and treatment (Obeng, 2008). In this context, the poorest oral health quality in the caregiver may be extensively associated with poor oral health and the presence of oral disease in the child (Obeng, 2008).

The problem of poor oral health still persists in the state of Massachusetts although some progress has been made in improving and promoting oral health (The Office of Oral Health, 2009). The crisis remains as underserved children continue to experience lack of access to dental care (The Office of Oral Health, 2009). Some preventable measures, including regular cleaning and exams, as well as dental sealants, are not accessible for some children in Massachusetts (The Office of Oral Health, 2009). In 2005, approximately 30-35% of such children reported having cavities (The Office of Oral Health, 2009). For the same year, over 12% of Massachusetts middle school and high school children reported never being examined by a dentist within the previous year (The Office of Oral Health, 2009).

In Massachusetts, over 1.3 million residents from 53 areas live in areas where there is a shortage of dental health professionals (Better Oral Health for Massachusetts Coalition, 2010). Such residents are less likely to have visited a dentist within the past year compared to those living statewide (Better Oral Health for Massachusetts Coalition, 2010). Minorities and children from lower-income areas of the state experience greater rates of dental decay due to lower access to oral health care (Better Oral Health for Massachusetts Coalition, 2010). For instance, about 45% of third graders statewide have dental sealants while only 29% of African American third graders have them (Better Oral

Health for Massachusetts Coalition, 2010). This confirms that over 76% of school children have no access to preventive measures, such as dental sealants and fluoride treatment (Better Oral Health for Massachusetts Coalition, 2010). A consequence of this issue is the high diagnosis of oral cancer in adulthood. The oral cancer survival rate, is lower among African American men than in Caucasian men, accounting for 36% compared to 61%, respectively (Better Oral Health for Massachusetts Coalition, 2010). This may reveal the need for Massachusetts to increase its oral care for children, since tooth decay in children is a powerful predictor of future poor oral health (Kandel, et al, 2012).

The problem is the lack of oral health care access among those underserved children whose parents are faced with social obstacles, preventing the children from having better oral health. Although some studies broadly touched the topic of oral health, none of them studied the issue in terms of the barriers that impact parents in accessing health care for their children in the state of Massachusetts, leaving a research gap. In this study, I addressed this gap by analyzing the issue at its roots. I tried to determine the reasons for this lack of access among underserved children by finding out each specific barrier that parents indicated. This study might be an asset for future researchers, as they might go deeper into the problem based on its foundation.

Purpose of the Study

Although many studies have presented the disparities existing in oral health, more information is needed to improve access to care in this area. The impact of parental perceptions about oral health in the actual oral care of their children has been the topic of

research as well (Bell, Huebner & Reed, 2012; Obeng, 2008). However, none of these studies exclusively focused on the specific barriers that impact parents in managing their children's oral health. The beliefs and self-efficacy of parents determine to what extent they are involved in promoting oral health behaviors by their children (Isong, et al, 2012). What needs to be determined is a fundamental understanding of the barriers to oral health care access for the underserved population, with a focus on how underserved parents view the oral supervision of their children, and what they do to access care.

The intent of this phenomenological qualitative study was to explore the phenomenon of oral health care access. The objectives were to: a) examine experiences reported by parents of underserved Massachusetts' children, b) determine the level of preventive oral care among these children, c) explore the barriers to oral health care access as perceived by such parents, and d) determine the perceived factors for parents that prevent them from seeking oral health care for their children and even supervise their oral hygiene.

Research Questions

Research questions are formulated in the phenomenological qualitative approach to investigation with the objective of uncovering the essence of and meaning of an individual's life experiences (Creswell, 2009). Researchers use this approach to explore the complexities of participant's experiences, as opposed to measuring factors quantitatively (Creswell, 2009). In qualitative research, narrowing down the study purpose in a more conceptualized research question is necessary to provide context to the results (Creswell, 2013).

An overarching research question allows the researcher to illustrate the participants perspectives according to the way they experience the central phenomenon. Thus, the two overarching research questions fundamental to this proposed study were as follow:

How do parents of children ages 5-10 years who self-identify as underserved explain the management of their children's oral health?

1) How do parents of children ages 5-10 years old who self-identify as underserved explain the management of their children's oral health?
2) What are the perceived barriers for parents of underserved children ages 5-10 years old in accessing oral health care for their children?

Theoretical Framework

The health belief model (HBM) was the theoretical foundation for this study (Janz & Becker, 1984). Figure 1, which I created, depicts a schematic representation of the HBM that is used as a guide for the study. The HBM was first established by social psychologists Hochbaum, Rosenstock and Kegels in the 1950s (Janz & Becker, 1984). These individuals worked in the U.S. Public Health Services and had used this theory to try to explain why medical screening programs, especially for tuberculosis, were not effective (Glanz, Rimer & Lewis, 2002). In fact, these psychologists developed this theory because of the failure rate of such programs. Since then, many researchers have tailored this theory to investigate a series of short and long-term health behaviors (Glanz, et al, 2002).

The HBM is a theoretical formulation proposed to elicit understanding of the reasons individuals may or may not engage in a wide range of health-related actions (Janz & Becker, 1984). The HBM is a major framework to organize, explain and predict the acceptance of health care recommendations (Janz & Becker, 1984). This is the most common theory used in health promotion and health education.

The basic tenets for the HBM are based on certain core assumptions or understandings that an individual will take specific actions related to health, only if: a) that individual feels that a negative health condition can be prevented, for instance in the case of poor oral health care (Glanz, et al, 2002), b) the person has a positive anticipation that following the suggested action, he/she will evade the negative health condition (Glanz, et al, 2002), or c) that individual believes that he/she can successfully take the suggested action (Glanz, et al, 2002). An individual realizing his/her susceptibility to a certain dental condition will try to prevent it by applying recommendations capable of mitigating or eliminate the condition. With the presented scenario, the individual has the confidence that he/she can access oral health services freely.

Researchers have used the HBM to emphasize the promotion of health as well as the prevention of disease (Bandura, 1998). Lifestyle habits have an important impact on the quality of health. Therefore, health practices concentrate on access to health care services in terms of reduction of disease, distribution of health care professionals, and restriction of disease-prone habits, in order to maintain health costs (Bandura, 1998).

A simplified way to represent this theory is in terms of four terms relevant to how an individual perceives threat and net benefits (Figure 1). These terms are: *perceived*

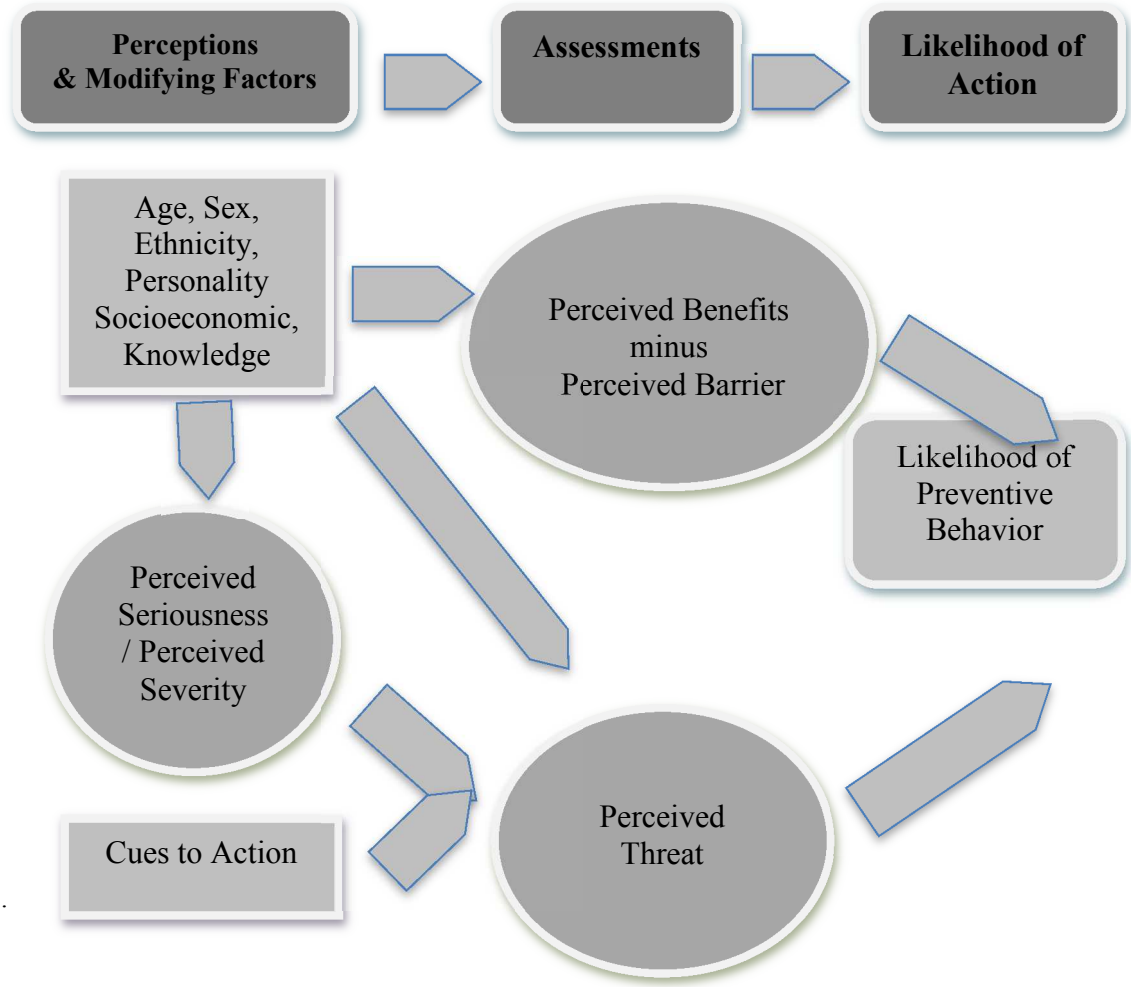
susceptibility, perceived severity, perceived benefits, and *perceived barriers* (Glanz, et al, 2002). These aspects affect a person's readiness to act. The HBM developers proposed the concepts of *cues to action* and *self-efficacy* in the intent to activate and stimulate a change in behavior as well as improving confidence in performing the suggested action (Glanz, et al, 2002). Through the guidance of the HBM, I was able to focus on the challenges of changing unhealthy behaviors, in the context of oral health.

This model illustrates that a person's actions or lack of actions to change his or her behavior results from the person's evaluation of several constructs, which include *perceived susceptibility, perceived severity, perceived benefits, perceived barriers* and *self-efficacy* (Fertman & Allenworth, 2010). With the HBM, I was able to relate the interpersonal, socioeconomic, cultural, and environmental factors that guide individuals in the process of seeking, initiating, and obtaining oral health services.

In order for individuals to follow preventive advice, they must perceive that the conditions to perform this action are appropriate and that no other factors are impinging upon them or on their ability to complete the suggested action. The HBM conceptualizes a number of potential influences on oral health decisions, such as health beliefs, individual preferences and knowledge, prior experiences, and social interactions. A person may weigh such influences against the severity of the disease or condition, assessing its perceived severity. This model guides researchers in explaining that if a person believes that the benefits outweigh the barriers, then he or she is more likely to take action to change (Fertman & Allenworth, 2010). I concentrated on individual's perceptions and the probability of taking action. The HBM was helpful in exploring the

perceived barriers to oral health care access as seen by the parents of underserved children in the state of Massachusetts.

Figure 1. Schematic Representation of the Health Belief Model



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Nature of the Study

The study utilized a qualitative inquiry with a phenomenological approach. Qualitative research was suitable because it made it possible for me to explore and understand the issue of oral health and answer the research questions. According to Creswell (2013), the phenomenological approach emphasizes on events and occurrences

as participants experienced them, with minimal regard for the external and physical reality. This approach helped me take into account people's perceptions, understandings, and perspectives of a particular situation.

The phenomenological approach allowed me to investigate the effects of poor access on the lives of parents of underserved children and the general health impact that it might lead to. By looking at multiple perspectives of this situation, I was able to make some generalizations of what it is like to experience lack of access to oral health care from the perspectives of these parents. The phenomenological approach helped me to acknowledge and explore the gap existing in the oral health care system, and bring about understanding and clarification on this issue.

Operational Definitions

The followings are specialized terms that were components of this investigation:

Access: is defined as the right or opportunity to use something or benefit from it (Oxford Dictionaries, 2014). In terms of health, it is the ability of an individual to receive health care services in accordance with personnel and supplies availability along with the ability to afford those services (McGraw-Hill Concise Dictionary of Modern Medicine, 2002).

Barrier: refers to any individual and/or organizational factor that can impede a person from performing an action (Jacobs, et al, 2011).

Oral health: refers to the state where an individual is free from any diseases or chronic conditions affecting the mouth, which may include oral sores, tooth decay, tooth

loss, mouth and facial pain, periodontal disease, throat cancer and birth defects such as, clef lip and palate (World Health Organization [WHO], 2014).

Perception: is a sensory experience of the world as one recognizes any environmental stimuli and takes action in response to such stimuli (Cherry, 2014). It allows one to gain information and act within the environment (Cherry, 2014).

Underserved: refers to people with life circumstances that make them susceptible to inadequate services, leading to health care difficulties (Moiduddin & Moore, 2008). These people are often a part of disadvantaged and under-resourced groups (Moiduddin & Moore, 2008).

Assumptions and Limitations

A number of assumptions and limitations affected this study in relation to the research subjects. I recruited participants from an urban setting located in the state of Massachusetts. Based on the large population of parents accessing this setting, I assumed that the gathered data derived from participants that provided honest responses to the queries. I also assumed that the interview instrument that I generated was valid to assess the views of these participants.

The study was limited to the study sample from which data were gathered as well as to geography, as only one urban site was used. This made it difficult to ascertain transferability to the larger underserved population. In addition, internal and external validity threats might also exist. For instance, participants self-reported and it is therefore impossible to verify participants' stories. Although member check was used to confirm provided information, there was no objective measure suggesting such information was

truly accurate. Also, according to Creswell (2013), maturation threat, which emerges as participants change during the study, might affect the study results. Hence, this also limited my study.

The study sample was a convenience sample, meaning that participants were selected in a nonrandom fashion. Based on this type of sample, random selection, which in quantitative studies might have led to equal distribution among study groups, was not appropriate. Also, external validity threats might have occurred based on the characteristics of individuals selected for the sample, the exclusivity of the setting and the timing of the experiment.

Scope and Delimitations

This proposed study was a phenomenological investigation of underserved parents of children aged 5-10 years in terms of their perceived barriers in accessing oral health care with these children. For each case, only one adult parent or legal guardian or caretaker, male or female, at least 18 years of age was required to participate in the study. More specifically, such parents had at least one child between the ages of 5-10 years. Participants also spoke and understood English fluently and were of any race or ethnicity. In order to justify the choice of children aged 5-10 years, researchers from the literature review along with the objectives of Healthy People 2020 reported untreated dental caries and poor oral health among children aged 6-8 years, which had increased nationwide (Kandel, et al, 2012).

In terms of delimitations, the study was bound to identify the barriers that prevented this population from accessing oral health services according to parental views.

Since the sample only involved participants from Massachusetts, only oral health conditions existing in children within the selected area were identified. The sample was used to elucidate the research question and to ensure better approach to improving integration of the study results in the general population. Though realizing the sensitivity and vulnerability of the population under study, the benefits of gaining deeper understanding of the barriers impacting better oral health care access outweighed the potential risks of not addressing the issue. Public health practitioners might be able to develop essential informed interventions aimed at assessing the needs of this diverse and underserved population.

Significance of the Study

In order to be in good overall health, it is essential to have good oral health **(**Franchi & Bumgardner, 2013)**.** The impact of poor oral care greatly increases the concerns of public health practitioners in regards to reducing health issues in order to promote health (Jones, et al, 2013). There is a need to expand the level of utilization of oral health care in the underserved population. This may be achieved by first identifying the key barriers experienced by individuals that are actually facing such issues, and then understanding the impact of these barriers on this population's health. Once these elements are determined, further research may ensue as to provide additional knowledge on this issue.

The results of this study will provide to public health practitioners and providers fundamental insights regarding barriers and situations preventing access to oral health services in the population of interest. Improving the quality of oral care throughout

people's lives requires ample coordinated and collaborative actions towards the needs of the country's vulnerable populations (Clovins, et al, 2012).

The outcomes of this study could promote better oral health policies and positive social change, particularly in the state of Massachusetts. The description of parents' own experiences may empower public health professionals to generate individual-based initiatives aimed at increasing preventive oral health among underserved populations. Also, with an increased knowledge about oral health care, individual quality of life could be assessed, which may lead to better health and social interactions.

Summary

Poor oral health is a public health concern worldwide, including in the United States. The prevalence of oral health diseases has significantly increased in the United States, especially in the underserved population (Shaefer & Miller, 2011). This population faces a number of barriers affecting their levels of oral health care access. Determining such barriers was the focus of this study, which helped assess the lived experiences of parents of children in this population and determine their levels of oral health care.

Chapter 2 provides a detailed explanation of the issue, along with any gap in the literature and why the study needed to be conducted. This review of literature encompasses current published documents of qualitative, quantitative, and mixed methods research. In Chapter 3, a detailed description of the qualitative method of inquiry, especially the phenomenological approach guiding the investigation will be

described. An outline of the sampling plan, study settings, data collection and analysis method are also included.

Chapter 2: Literature Review

Introduction

Oral health is important, particularly in the early years of life, as it determines and influences oral health in the future as well as the occurrence of related disease in adulthood (Bhaskar, McGraw & Bivaris, 2014). It is a necessary prerequisite for general health (Humagain, 2011). Since adoption of behaviors and lifestyles are likely to occur at an early age, children are an excellent group to study for oral health practices (Sharda, et al, 2011). The problem of oral health affects the quality of life and the general health of children, including those in preschool. The burden of the disease is mostly found in the disadvantaged population of children (Jürgensen & Petersen, 2013; McClain, McClain & Paventy, 2012). Among the youth population, recent studies reveal that oral health care is the most reported unmet health need (Davis, et al, 2010; Mueller, Schur & Paramore, 1998). Clovis, et al. (2012) explained that the poorest health levels and lack of oral health care access is prevalent in vulnerable populations. Approximately 20% of underserved children in the United States between the ages of 2-5 years old experience untreated oral diseases (Ashkanani & Al-Sane, 2013).

Since the oral health issue is a community as well as a national concern, it was important to involve and enable parents to supervise their children's oral health from the start, in order to identify their barriers to oral health inequalities in their children (Owens, 2011). Literature revealed a considerable number of barriers pertaining to the application of dental care among this group. Several factors impact the prevention of oral diseases and the promotion of oral health at the national level. These factors include: patients, in

terms of their lack of awareness of oral health issues and lack of motivation to maintaining good oral care, dental care providers, dental practices and the dental health care delivery system, in terms of providers unavailability (Arheiam, Masoud & Bernabé, 2014; Brennan & Spencer, 2005).

The poor oral health among underserved children is also affected by the utilization, availability, and access to oral health services, and the knowledge and attitudes of parents in relation to seeking oral care for their children. Parents report that their children's oral health is worse than their general health (Mandal, Edelstein, Ma & Minkovitz, 2013).

In the state of Massachusetts, this problem constitutes a major concern. Underserved children in the state lack access to oral health care, leaving them with poor oral health that may potentially impact their future health. This issue may be related to the barriers and challenges that their parents themselves face.

Addressing these key barriers to oral health care access was a difficult task for parents in all areas of the country (Clovis, et al, 2012). In order to improve and promote oral health care in the population, it is important to investigate, identify, and address those factors preventing dental care access (Arheiam, et al, 2014). Assessment of parental experiences in utilizing dental care may alleviate the barriers that they face in accessing oral care (Askelson, et al, 2013). With successful assessment, a higher implementation rate of preventive dental practices may ensue (Arheiam, et al, 2014). The purpose of this study was to: a) to examine experiences reported by parents of underserved Massachusetts' children, b) to determine the level of preventive oral care among these

children, c) to explore the barriers to oral health care access as perceived by such parents, and d) to determine the perceived factors for parents that prevent them from seeking oral health care for their children and even supervise their oral hygiene.

This chapter is divided into four sections. The first section includes the impact of poor oral health on the health and quality of life children. The second section describes the level of utilization of oral health services among children. The third section reveals certain predisposing factors influencing oral health access among the children. Lastly, the fourth section includes a demonstration of some personal beliefs and practices impacting the oral care seeking behavior. Finally, a brief overview is provided of the issue of poor oral health access among underserved children in the state of Massachusetts.

Literature Search Strategy

The first strategy I employed in the literature search was analyzing all the elements of the topic. I developed a list of subtopics based on my assessment of those elements of the major topic.

The literature search for this study started in the winter of 2013. During that time, the topic of oral health care seemed too general. During the initial literature search, my population of interest became clear. Instead of focusing on adults with oral health care issues, I decided to focus on a population in which those issues could have been prevented. The population of interest narrowed to include only children at the state level. Since I reside in the state of Massachusetts and became familiar with a number of diseases and conditions affecting this population, I opted to study the problem in the children population of this state.

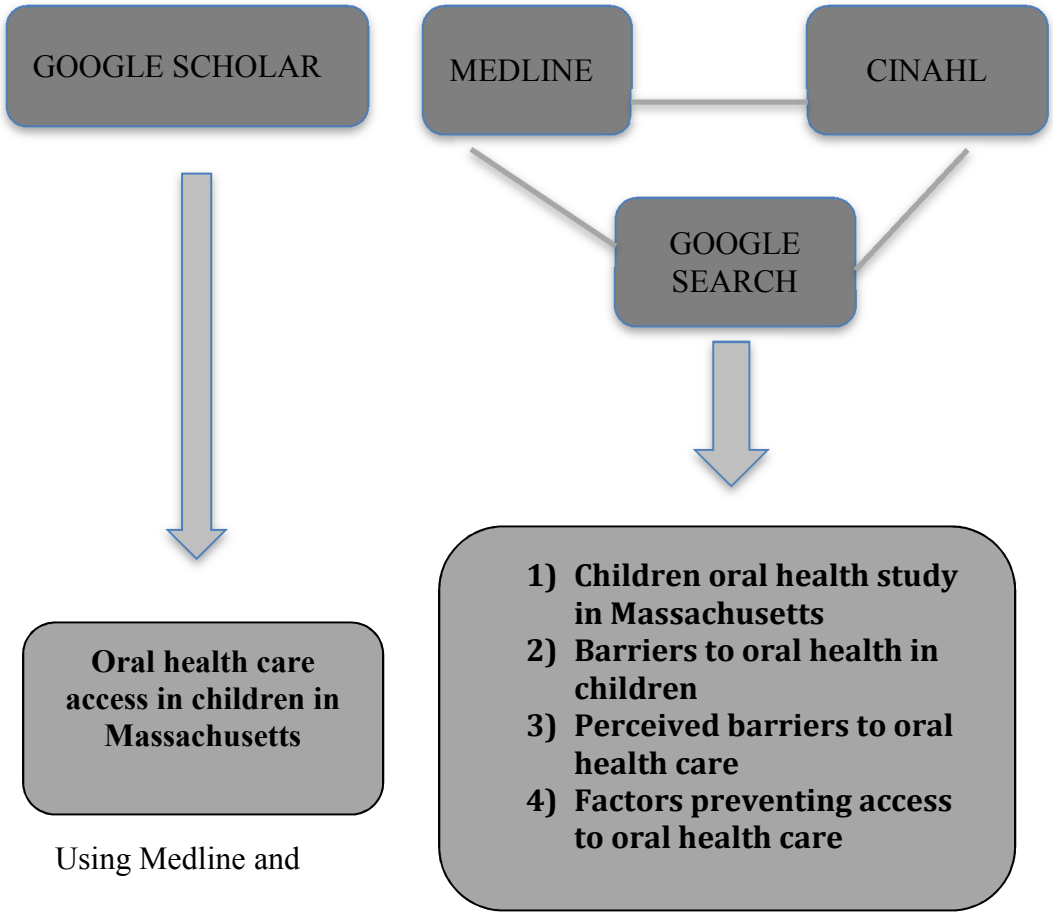
As my search progressed, I realized that not many studies had been done in this state, and the few that I found were mostly quantitative. Therefore, I decided to use a phenomenological approach to examine oral health care access in the children population.

The literature review was based on several relevant peer-reviewed articles published within the last 5 years, along with a few seminal studies. Such seminal materials, although older than the 5-year mark, were selected according to their relevance to the problem statement. In order to obtain such materials, I first broadened my search of the topic of interest using "Google Scholar" and entered the key phrase "oral health care access in children in Massachusetts." In other words, I searched for scholarly articles by setting this specific phrase in the search engine. This search engine generated daily list of articles closer to the topic of interest. I then read the abstract of each presented study. If the article was relevant to the topic, I kept reading through the purpose and conclusion. If it still pertained to the question, I read the entire article. I focused on the gaps in the research, whether they made sense, and if the information was consistent. If the article did not meet the requirements or if it was on a different topic altogether, I proceeded to the next.

I used Walden University library databases (Medline and CINAHL) and Google Search to access literature. I also obtained additional articles from the references of the peer-reviewed articles themselves and published doctoral dissertations. Figure 2 denotes a schematic representation of the key terms used to search the literature. Again, the same reading strategies were adapted to identify relevance to the phenomenon under study. I

continued my search until I found a collection able to fulfill the needs of the literature review.

Figure 2. Flowchart of Key Search Terms from Academic Databases



Using Medline and CINAHL, I was able to search articles by the keywords: *children oral health study in Massachusetts*, *barriers to oral health in children*, *perceived barriers to oral health care*, and *factors preventing access to oral health care*, as depicted in Figure 2. I selected the peer-reviewed articles that were the most current.

Theoretical Foundation

In this study, I explored parental perception of barriers to oral health care access. The issue of poor oral health and access is significant among children, particularly in the underserved population (Clovis, et al, 2012; Jürgensen & Petersen, 2013; McClain, et al, 2012).

The HBM was used as a theoretical framework and has been used to guide previous research in order to develop interventions related to health behavior (Janz & Becker, 1984). HBM is a psychological model that is based on predicting and explaining health behaviors (Glanz, et al, 2002). The constructs of this model were initially developed by social psychologists, including Hochbaum, Rosenstock and Kegels, in the 1950s, in an attempt to interpret health behavior in the population (Rosenstock, 1974). This theory is practical in situations where the behavior is weighed against an expected outcome. The HBM states that health-related action is dependent on the occurrence of three specific factors: 1) a sufficient concern or motivation to make the health issue relevant, 2) the belief that the individual is vulnerable to a serious health problem, which is perceived as a threat, 3) the belief that if a particular health recommendation is followed, the threat will be reduced (Rosenstock, Strechter & Becker, 1988).

According to Rosenstock (1974), the likelihood of an individual to take action to prevent and control a disease or condition is dependent on how they perceived themselves as being susceptible to the disease or condition. If they believe that they could decrease the severity of the disease and that a certain course of action would be beneficial, they are more likely to change their behavior and adopt the proposed course of

action (Newell, Modeste, Marshak & Wilson, 2009; Rosenstock, 1974). The HBM has been a significant tool guiding health practitioners in identifying the specific needs of a target population, according to certain behavior, social and psychological factors influencing individual perceptions (Glanz, et al, 2002; Janz & Becker, 1984).

The HBM guided my understanding of the perceptions of barriers to oral health care access among parents of underserved children, which might have influenced their understanding of the importance and the need for their children to have good oral health. There are a wide range of factors that can influence the perception of an individual, such as socioeconomic, cultural, and psychological.

The five specific constructs of the HBM depict the prediction of behavioral changes These five dimensions were applied to the perception of oral health care and access as follow:

1. Perceived susceptibility: parents' concern that their children might develop certain conditions such as dental caries, permanent tooth loss, or other periodontal diseases in the future.
2. Perceived severity: parents' belief in the seriousness of dental caries, permanent tooth loss, and periodontal diseases.
3. Perceived benefits: parents' belief concerning the advantages of applying and accessing preventive oral care to reduce such disease risks in their children.
4. Perceived barriers: parents' belief of what they saw as actual barriers restricting them from accessing oral health care with their children.

5. Self-efficacy: parent's confidence that they were able to achieve good oral hygiene with their children (Janz & Becker, 1984).

The HBM has been used in a variety of studies focusing on health behaviors, as to detect why individuals were not practicing certain preventive measures. Kasmaei, et al. (2014) integrated this model to investigate how it could work among preadolescents. The authors explained that oral health beliefs were a major influence in terms of the frequency of tooth brushing in preadolescents (Kasmaei, et al., 2014). Kasmaei, et al. (2014) also found out that perceived severity and perceived psychological barriers were the main construct for predicting tooth brushing in this population.

The HBM has been used in conjunction with other theories, including social cognitive theory (SCT) and the theory of planned behavior. With the SCT, Rosenstock, et al. (1988) explained the contribution of the role of informative and motivational behavior in altering behavior. Along with the HBM, the SCT was a major delineating element of the self-efficacy concept, by assuring successful execution of the required behavior (Rosenstock, et al., 1988). In terms of the theory of planned behavior, Sun, Buo, and Sun (2009) stated that stronger health belief values were acquired in conjunction with the HBM due to a direct effect of attitudes, behavior identity, and barriers on the likelihood of action.

Researchers have used the HBM to elicit a particular course of action necessary to reduce the impact of some specific conditions. Although the following studies did not focus on oral health, it was important to demonstrate the necessity of applying the HBM in medical interventions. Janz & Becker (1984) explained the fundamental principles of

the HBM in relation to behaviors associated with conditions, such as influenza. They explained the actions taken to avoid the illness, those taken after the diagnosis in order to prevent further progression of the disease, and the importance of clinical visits. In another study, Katz, et al. (2009) used the HBM in order to decrease the risk of cardiovascular disease. The authors explained that patients experiencing cardiovascular symptoms such as chest pain were at greater risk for heart attacks. Katz, et al. (2009) stated that an educational program focusing on lifestyle changes including diet, exercise, and tobacco cessation would be a greater benefit for these individuals.

In regards to this proposed study, I intended to fill the gap in the literature by providing new insights on the barriers that parents in the state of Massachusetts perceived as being an impingement to the oral health of their children. The constructs of the HBM theory helped me identify parents' perceptions along with their knowledge of oral health practices and behaviors. During the interviews, I presented the five aforementioned constructs of the HBM, as to capture participant's experience.

Impact on Health and Quality of Life

Besides being a major oral health concern, poor oral health is also a serious socio-behavioral problem (Shilpashree, Manjunath & Ramakrishna, 2013). The negative impact that is often observed is the effect on the quality of life of the affected children along with their families (Oredugba, Agbaje, Ayedun & Onajole, 2014). For instance, in the case of bad breath, children may experience low social confidence due to discomfort and embarrassment (Kasmaei, et al, 2014). Also, in the case of toothache, they may reduce their daily activities, such as school or other social encounters (Nourijelyani, et al, 2014).

It is important to seriously consider oral health in children based on a series of factors. Oral health is essential to the general health and well-being of individuals, for it affects several aspects of the human life, including the physical and psychological (Kasmaei, et al, 2014; Lewis, Barone, Quinonez, Boulter & Mouradian, 2013). A good oral health is essential in promoting self-esteem, social confidence as well as quality of life (Kasmaei, et al, 2014). In order to minimize social discomfort and embarrassment and prevent diseases, maintaining a high-quality oral health is crucial (Kasmaei, et al, 2014).

Certain psychological problems that affect children involve the necessity for general anesthesia and hospitalization, in the case of severe caries (Hamdan, et al, 2013). Emotional trauma may result from these experiences, particularly with the general anesthesia (Arrow, Raheb & Miller, 2013; McClain, et al, 2012; Peterson-Sweeney & Stevens, 2010). Such procedure and hospitalization explain the necessity to access oral care only when the condition is severe and not for prevention. Also, school children with poor oral health tend to miss more school days and partake less in daily activities than the ones with good oral health (Nourijelyani, et al, 2014). This time lost from school impinges parents and caregivers from important responsibilities, such as work and other activities (Bhaskar, et al, 2014; Noro, Rocalli, Mendes, Costa de Lima & Teixeira, 2014). Children with poor oral health may express low self-esteem, discomfort, embarrassment, depression, and chronic stress (Gibbs, et al, 2014; Humagain, 2011). In consequence, they may have difficulty conversing and socializing (Peterson-Sweeney & Stevens, 2010). Evidence shows reduction in school performance and poor social relationships (Oredugba, et al, 2014).

Among the chronic diseases related to poor oral health, dental caries is the most common and preventable one (Chen, et al, 2014; Mathur & Gupta, 2011). It disproportionately affects the vulnerable segments of the population, including children who are detrimentally influenced (Bhaskar, et al, 2014). The development of dental caries in the primary dentition of children is also linked with defects in the enamel of the primary teeth (Hamdan, et al, 2013). If preventive measures are not followed, enamel defects may also be seen in the secondary dentition (Hamdan, et al, 2013). Also, dental plaque is a precursor to dental caries and the presence of plaque is indicative of the oral health status of a child (McClain, et al, 2012). If dental plaque is seen in children, then they are more likely to have caries, as opposed to those with no plaque (McClain, et al, 2012). As the children become older, they may develop further oral issues, including, gingivitis and periodontal disease (Jürgensen & Petersen, 2013; Peterson-Sweeney & Stevens, 2010). According to Shelley, Russell, Parikh & Fahs, (2011), poor oral health is also associated with teeth loss and reduced nutrition, notably during adulthood. Serious morbidity and mortality may also ensue, particularly in developing countries (Shelley, et al, 2011).

Early childhood caries is described as decay in one or more teeth, or when the surfaces of the primary tooth is missing or filled, in a child aged 6 years or younger (Ashkanani & Al-Sane, 2013; Baginska, Rodakowska, Milewski & Kierklo, 2014; Hamila, 2013). This condition arises when the teeth are colonized by cariogenic microorganisms, in association with poor nutritional habits (Hamila, 2013). Sood, Ahuja & Chowdhry (2014) discussed the interdependent relationship existing between nutrition

and oral health. Consumption of food occurring locally in the mouth, gives rise to the formation of oral biofilms and dental caries (Sood, et al, 2014).

Recent genotypic and phenotypic studies accentuated on the issue that children become infected from their mothers (Suresh, Ravishankar, Chaitra, Mohapatra, & Gupta, 2010). Indeed, early childhood caries is transmitted vertically to children from mother/caregivers (Bozorgmehr, Hajizamani & Malek Mohammadi, 2013; Nagarajappa, et al, 2013; Reang & Bhattacharjya, 2013; Vinay, Naveen & Naganandini, 2011). This is to emphasize that mothers who feed their children improperly allow them to acquire *Streptococcus mutans* bacteria associated with the development of dental caries early in life (Peterson-Sweeney & Stevens, 2010; Reang & Bhattacharjya, 2013; Suresh, et al, 2010).

Severe dental caries can even impact children's nutrition, hence affecting their quality of life (Chen, et al, 2014). According to Chen, et al (2014), this condition may affect the amount and the type of food that the child may eat due to poor chewing. Nutritional imbalance may disrupt the development and eruption of teeth, which may lead to detrimental oral and periodontal infections (Nagaraj & Pareek, 2012; Sood, et al, 2014;). Poor nutrition in the early ages may be defective to the teeth during a child's development. This makes them more susceptible for dental caries to occur after the eruption of teeth (Sood, et al, 2014). With the consumption of high cariogenic foods and an inadequate oral hygiene, children are susceptible developing dental caries (Mani, et al, 2010).

With the eruption of new permanent teeth in children, the immature enamel is more susceptible to the acid contained in soft drinks (Zhang, Chau, Lo & Chu, 2014). Among the popular soft drinks include soda, energy drinks, and 'healthy' drinks, which are also rich in fermentable sugars (Zhang, et al, 2014). Therefore, with the increased consumption of such drinks in children, they are likely to be affected by dental erosion (Mathur & Gupta, 2011; Mehta & Kaur, 2012; Zhang, et al, 2014). Also, with a preference to sugar, dental caries can influence a child to have high-sucrose diet, compromising their likelihood to intake other nutrients (Chen, et al, 2014).

If tooth decay is left untreated, it can lead to infection of the dental pulp, causing pain and dental abscess (Arrow, et al, 2013; Jürgensen & Petersen, 2013; Gibbs, et al, 2014; Zhang, et al, 2014). Also, severe local and systemic infections can be the sequelae of infection from dental caries (Zhang, et al, 2014). Failure to thrive can also occur, as a result of this rampant condition, which often develops in the primary teeth of young children (Ashkanani & Al-Sane, 2013; Shilpashree, et al, 2013). Nevertheless, dental caries is preventable when adopting preventive measures, which include regular tooth-brushing, appropriate nutrition and consistent dental check-ups (Arrow, et al, 2013; Gao, Lo, McGrath & Ho, 2013).

Levels of Oral Care Utilization

When it comes to children's oral health, families play an essential role (Isong, et al, 2012). Early in a child's life, parents may outline oral health practices as well as determine when to seek regular dental care (Isong, et al, 2012). Certain preventive and management practices against childhood dental caries include the establishment of good

oral hygiene, minimal sugar exposure in the diet and sufficient fluoride exposure (Isong, et al, 2012).

Noro, et al, (2014) explained that individuals with limited access to oral health care services are more likely to experience toothache and seek urgent care more often. Emergency and curative dental services are frequented more often as opposed to preventive services (Oredugba, et al, 2014). In this context, this is an unsatisfactory approach, for children tend to develop high anxiety, which makes them less likely to seek further care (Noro, et al, 2014).

Evidence also demonstrated that children practicing preventive dental care before the age of 5 years are more likely continue utilizing such measures in the future (Derisse, Archer & Kingley, 2013). Therefore, they are less likely to seek emergency oral care and have invasive procedures. On the contrary, those above 5 years of age frequent preventive services less often, which results in greater access to emergency care and invasive procedures (Derisse, et al, 2013).

Although it is recommended that children receive services, such as oral exams, dental sealants and fluoride treatment, those from the vulnerable population have no such opportunity (Bell, et al, 2012). Among the disadvantaged children, only a small number of them may have access to dental services (Hamdan, et al, 2013). For instance, in their study, Askelson, et al (2013) reported that 67% of children of low-income families were affected by dental caries. Yet, Bouchery (2013) stated that only 37% of children that were enrolled in Medicaid had any dental services within the previous year.

Furthermore, Baginska, et al (2014) findings revealed a higher prevalence of caries mostly in children's primary teeth. Mehta and Kaur (2012) revealed a high percentage of children reporting having pain and discomfort in their teeth and gums the year prior. However, only a minimal number of them had consulted a dentist (Mehta & Kaur, 2012). In their study, Pourat and Finocchio (2010) found that 39% African American and 36% Latino children had longer interval between dental visits. In the state of Massachusetts, approximately 37% of children between the ages of three to five are affected with dental caries and over 35% of those in middle school have cavities at least for over a year (Better Oral Health for Massachusetts Coalition, 2010).

In children 7 years old and older, the level of caries often requires tooth extraction, particularly of the primary molars (Baginska, et al, 2014). The study also related this issue with parents' neglecting their children's oral care, (Baginska, et al, 2014). They avoid pursuing preventive measures such as pit and fissure sealants for permanent teeth (Baginska, et al, 2014). Accordingly, parents who are ignorant about the nutritional needs of their children can jeopardize their overall oral health (Nagaraj & Pareek, 2012).

Predisposing Factors

Certain familial factors are influencing children's oral health. These include parental age, occupation, education, knowledge and attitude about health (Bozorgmehr, et al, 2013; Oredugba, et al, 2014). Indeed, low educational levels in parents are a high-risk factor (Chen, et al, 2014). Some other significant barriers in acquiring oral care include

lack of perceived need for care, shortage of trained providers and lack of dental coverage (Shelley, et al, 2011). A detailed explanation of such factors is provided as follow.

Socioeconomic Factors

Socioeconomic status is a measurement of parental education and family income (Levin, Davies, Douglas, & Pitts, 2010; Nourijelyani, et al, 2014). The distribution of dental caries is strongly associated with unequal conditions in the different groups of the population (Freire, et al, 2013). These conditions may include family income, education level as well as their occupation (Freire, et al, 2013). The highest frequency and rates of the disease is seen in the poorest segments of the population (de Oliveira, et al, 2013). Thus, this challenge in oral health is marked by the influence low-education level, inability to understand the value of oral health and the restricted access to such services (Nourijelyani, et al, 2014). This increases the risk for children not to practice using a toothbrush as well as dental floss (Nourijelyani, et al, 2014).

Furthermore, socioeconomic status is associated with access to oral health information and services (Chen, et al, 2014). The use of and access to dental services are linked to the inequalities in socioeconomic status (de Oliveira, et al, 2013). Compared with more affluent individuals, those with low income have negative experiences with caring for their oral health (Askelson, et al, 2013). According to Chen, et al (2014), children from families of low socioeconomic status exhibit poorer oral health outcomes, visit the dentist rarely and have less protective dental equipment, such as dental sealants. This is evidenced in households with the lowest education and income (Chen, et al, 2014;

McClain, et al, 2012). According to Lewis, et al (2013), there are substantial barriers to accessing preventive care and receiving treatment for children from low-income families.

Racial and Ethnic Factors

Also, there are racial differences between individuals seeking oral care. The issue of poor oral health is mostly observed in minority populations, the poor and the immigrants (Shelley, et al, 2011). Besides facing the challenges of high-disease rates, minority populations also experience high levels of dental caries (Ashkanani & Al-Sane, 2013; Hamdan, et al, 2013). Inadequate practices are observed among minorities, those of families with low-education levels and under social assistance (Rajabium, et al, 2012).

Among the minority populations, Blacks and Hispanics experience the highest rates of unmet needs and the poorest access to oral health preventive measures resulting in a higher rate of dental caries (Derisse, et al, 2013). Latino and African American children covered by Medicaid or CHIP access services less often (Pourat & Finocchio, 2010). They have difficulties making or keeping appointments, which diminish their chance of gaining access to dental care (Pourat & Finocchio, 2010). This may be due to the low income and lack or inadequacy of insurance coverage often observed in minority individuals (Derisse, et al, 2013).

Immigration Status

Being a citizen and having a general source of medical care allow an individual to access providers and continue with their care (Pourat & Finocchio, 2010). However, those from different places of citizenship or residence may not have the same opportunity. And so, families of immigrant background are subject to poor oral health.

Studies reveal that children from immigrant families have difficulties accessing oral services (Chen, et al, 2014). This compromise in oral health is often due to cultural conflicts, language barriers, lack of support systems and even social isolation, experienced by their parents (Chen, et al, 2014). Particularly in developing countries, poverty, inequality along with unemployment status are found at the root of the issue of poor oral health (Chen, et al, 2014).

In terms of refugee families, they experience several barriers in accessing appropriate oral care with their children (Nicol, Al-Hanbali, King, Slack-Smith & Cherian, 2014). Children from families of migrant and refugee origins are more socially disadvantaged and have a higher risk of poor oral health compared to those from families of the country they migrate to, assuming they migrate to a more developed country (Gibbs, et al, 2014). Understanding these cultural differences may help identify the reasons for refugee families not accessing care with their children (Nicol, et al, 2014).

Insurance Coverage

Another factor predisposing parents to avoid attending dental check-ups with their children is the absence of dental insurance coverage (Nourijelyani, et al, 2014). Recent studies have associated lack of insurance coverage with the poor access to oral health services. Comparing to children with medical and/or dental insurance, those without health or dental coverage tend to have more untreated caries (Derisse, et al, 2013). Individuals with financial barriers with no form of dental insurance coverage avoid seeking care due to high costs of oral health services (Thompson, Cooney, Lawrence,

Ravaghi & Quiñonez, 2014). Many individuals lacking dental insurance have difficulties accessing oral health services (Davis, et al, 2010). Instead, they tend to rely on emergency dental care when needed and often do not practice preventive care.

Thompson, et al (2014) findings demonstrated that individuals with low income without dental insurance are six times more likely to evade oral health services as opposed to those with insurance and higher income. They often report not being able to afford the high costs of dental cleanings, visits and treatments with their children (Rajabium, et al, 2012; Thompson, et al, 2014). They sometimes report not being able to pay for care having to make other sacrifices to survive (Thompson, et al, 2014). In this context, children with private insurance visit the dentist more often than those that are publicly insured, either by Medicaid or CHIP (Pourat & Finocchio, 2010). It often results in worsening damages to the children's teeth (Thompson, et al, 2014).

Environmental Factors

The rural population is faced with several difficulties affecting their access to oral health care (Levin, et al, 2010). These comprise lack of financial resources, poor knowledge about oral health, lack of access to primary care services (Emami, Wootton, Galarneau & Bedos, 2014). Also, certain contextual factors, such as under-provided infrastructures and lack or unequal distribution of public services are key attributes to the negative influence on the oral health of such underserved children (Emami, et al, 2014). Individuals residing in rural areas are less likely to refer to the services of dentist and orthodontists (Emami, et al, 2014). Compared with the ones living in urban areas, they do not have dental coverage and may not even have access to emergency dental services

(Emami, et al, 2014). Also, the availability of dental providers is also scarce in such areas (Emami, et al, 2014). Children in rural areas have higher rates of dental caries and unmet needs, and are less likely to access services.

Availability of Dental Providers

Moreover, underserved children do not have the oral health care they need based on the unavailability of dental professionals, providers and facilities (Kandel, et al, 2012). The availability of the dental workforce, its distribution, insurance coverage and the cultural competency of oral health professionals are also elements to consider in this issue (Divaris, et al, 2014). There is a diminished availability of oral health care providers caring for the underserved children in minority populations, with families of low income and perhaps under the coverage of Medicaid or CHIP programs (Derisse, et al, 2013). In addition, fewer or no general dentists provide treatment to children in those programs (Pourat & Finocchio, 2010). This is the result of the low-reimbursement rates of such programs (Pourat & Finocchio, 2010).

Cultural Factors

Cultural practices are important to assess when it comes to understanding parental oral health care for their children. Different countries have different oral delivery care system, which may affect how individuals perceive what is necessary for their children (Bozorgmehr, et al, 2013; Prowse, et al, 2014). Depending on which cultural group one is affiliated to, once there is no specific definition of poor oral health and what it entails, such individuals may lack essential information about oral health and how to access and comply with it (Prowse, et al, 2014).

Personal Beliefs and Practices

Parental Beliefs and Perception

Children rely solely on their parents for their oral health care. However, it is the parents' responsibility to ensure that the children are accessing and receiving adequate preventive care and practicing good oral hygiene. Since dental care and access is a perceived need for an individual, if one does not judge its practice necessary, then poor oral health may result (Divaris, et al, 2014). Values, beliefs, attitudes and behaviors related to oral health are usually established in early childhood (Nourijelyani, et al, 2014). These values are often ascertained by parents, particularly mothers. When mothers spend more time interacting with their children, training and fostering them, they are more likely to develop good oral habits and have better oral health (Nourijelyani, et al, 2014). However, parents and children among the vulnerable population are, in this context, challenged. In this segment of the population, studies demonstrated that individuals' perceptions, beliefs and attitudes are all associated with the expectation of poor oral health (Divaris, et al, 2014).

In the case of parents not seeking care with their children, they may inaccurately perceive that any issue occurring in the primary dentition of their children is not as important (Bell, et al, 2012). They may also think that accessing care should be only when there is extreme pain or other severe dental conditions (Bell, et al, 2012). A common reason for individuals to avoid visiting the dentist with their children is based on the perception that there is no need to seek dental with them (Oberoi, Mohanty, Mahajan & Oberoi, 2014). If they use dental services once, they may be unable to follow-up in the

future based on the quality of oral hygiene services received and even the lack of empathy of the oral health providers (Oberoi, et al, 2014).

Parental Knowledge

Parental beliefs and self-efficacy may indicate the extent of oral health promoting behaviors (Isong, et al, 2012). For, the degree of the health literacy of a child's caregiver is considerably linked to the oral disease status in the child (Isong, et al, 2012). Therefore, the issue of poor oral health is linked to parental lack of awareness about oral diseases, their low-education level and economic status (Hamila, 2013). Indeed, lack of knowledge of parents and children about what constitutes oral health may be a consequence of the children poor oral health maintenance (Mehta & Kaur, 2012). For, it involves the degree of health literacy of the parents to understand the necessity of their children's overall oral health (Hamila, 2013; Owens, 2011). Often parents believe that the primary teeth are not important as the permanent ones and do not see the need to practice oral care and visit the dentist with them (Hamila, 2013). Literature also demonstrated that immigrant mothers have poor knowledge of dental caries as well as poor dental practice (Chen, et al, 2014). It indicated that cultural differences play an important role in attending and practicing oral health care with children (Chen, et al, 2014).

Parental Practices

Several studies found dental caries in preschool children to be associated with lack of parental supervision. This is mainly related to the tendency of such parents to pay minimum attention to the child's brushing habits along with their high consumption of sugar (Chen, et al, 2014). Also, these parents may have poor brushing habits themselves

(Manna, Carlén, Lingström, 2013. Thus, parents have a high role in whether a child develops dental caries or not.

Parental Attitudes

When it comes to developing successful oral health preventive measures, a positive attitude along with high-knowledge level is required (Chen, et al, 2014). Development of healthy attitudes in relation to oral health practices is dependent on family influence (Oredugba, et al, 2014). Indeed, these are the years of primary socialization between mothers and children, where good habits are usually established (Suresh, et al, 2010; Thakare, Krishnan, Chaware, 2011). Evidence demonstrated that parental self-concept of oral health relates to their behavior of seeking care with their children (Rajabium, et al, 2012). Parents who express poor attitudes, who are less motivated and mistrust or fear dentists, tend to avoid seeking care (Rajabium, et al, 2012).

Moreover, parental awareness, attitudes and behaviors may help counteract poor oral health habits in children. In their study, Chen, et al (2014) pointed out that mothers with higher knowledge of dental health are more likely to apply preventive measures. These include assisting children in brushing their teeth prior to the age of one, using fluoride toothpaste, flossing and visiting the dentist regularly for dental check-ups (Chen, et al, 2014). Also, positive attitude exhibited by parents elicits them to replace children's toothbrushes within three months (Chen, et al, 2014). Oredugba, et al (2014) demonstrated the role of mothers as an integral part in helping children develop healthy habits, hence improving their access to oral health care. This is due to the formative

attitude of mothers in the early years of the children's lives. Therefore, the values and norms instilled in these children depend on the parents' oral health knowledge itself.

In parents with poor attitudes towards their children's oral health, researchers found that these children have an increasing number of caries (Thakare, et al, 2011; Suresh, et al, 2010). For, they are not aware of the importance of maintaining good oral health and the risks associated with caries (Suresh, et al, 2010). The behaviors expressed by people are most likely to occur in cluster rather than in seclusion (Singh, Rouxel, Watt & Tsakos, 2013). Thus, unfavorable behaviors of parents may have adverse effects on the oral health of their children.

On the other hand, the more positive the parents' attitudes, the better the oral health of their children (Thakare, et al, 2011). When such notions are learned early in life, they are less subject to change (Vinay, et al, 2011). In the case where they are not adopted during childhood, it may become difficult to do so at a later stage in life (Thakare, et al, 2011). As parents demonstrate preventive oral behaviors to their children, these are more likely to become influenced and maintain such practices throughout their lifetime (Gao, et al, 2013; Manna, et al, 2013; Nagarajappa, et al, 2013; Sharda, et al, 2011).

Family Dynamics

Besides the individual, cultural and environmental factors playing a role in the occurrence of oral health diseases in children, it is necessary to also account for the behavior and dynamics of the family (Mani, et al, 2010). With the increase parental responsibilities in the 21st century, parents have to work outsides of their home so that

they can manage their quality of life (Mani, et al, 2010; Vinay, et al, 2011). In this case, young children spend a major part of their day with other caretakers, such as in daycare centers (Vinay, et al, 2011). Here, the attitude of caretakers, their knowledge and ability to practice oral care is also a factor in the children poor oral health (Mani, et al, 2010). Also, some parents report having too many responsibilities as they have to manage a larger household with multiple children (Hamila, 2013). They find it difficult to care for their children oral health while trying to cope with other necessities. Since parents do not have time to supervise the children, the risk of detrimental oral health also increases.

Parental Motivation

Another important aspect of accessing oral health services with children is the ability for parents to recognize the need for the children to receive preventive dental measures (Askelson, et al, 2013). When it comes to practicing oral care and attending oral health services, Halvari, Halvari, Bjornebekk & Deci (2013) presented the self-determination theory model. This model evaluates how an individual's decision to seek oral health care with their children may determine their overall oral health well-being. Thus, this decision is related to an autonomous and supportive motivation, ensuring that the individual perceives the satisfaction that will later ensue (Halvari, et al, 2013). This choice is not only based on personal factors, such as past experiences and judgments, but it also reflects social comparisons (Halvari, et al, 2013). Whether an individual decides to access care or not, it all depends on the value they assign to their children' oral health.

Additional studies suggested that if one is informed and positively reinforced, there is a greater chance for better compliance with their oral health (Chandra Shekar,

Reddy, Manjunath & Suma, 2011). In this context, when no information is available, one may have reasons not to seek or adhere to oral health practices and services (Chandra Shekar, et al, 2011). In order for individuals to become motivated to pursuing care, they have to believe that they are susceptible to oral diseases, which are serious and that treatment is of great benefits (Chandra Shekar, et al, 2011). Thus, once someone believes that they are at risk, they are more likely to attend preventive dental services (Chandra Shekar, et al, 2011).

Qualitative Studies on Oral Health

Among the articles selected for this review, only a few were related to the chosen design and the phenomenon under study (Clovis, et al, 2012; Emami, et al, 2014; Isong, et al, 2012; Isong, Dantas, Gerard & Khulthau, 2014). The majority of the studies reviewed on oral health used quantitative approach. This also proves the need for a qualitative research in this area.

Out of the four qualitative studies, the researchers in one of them used the phenomenological approach guided by the HBM, similarly to this proposed study. Among two others, the researchers used semi-structured interviews conducted both in-person and by phone, while in the last study, the researchers applied a semi-structured telephone approach. For the phenomenological approach, Emami, et al (2014) employed the HBM to capture the experiences and perceptions of rural residents with various social, economic and demographic profiles, in regards to oral health care and access.

The two semi-structured in-person and telephone interviews focused on two different target populations. For instance, Clovis, et al (2012) interviewed health care

professionals, including dentists, dental hygienists, physicians and individuals involved in policy development. The idea here was to engage health care professionals in disseminating knowledge of oral health (Clovis, et al, 2012). This one related to the social significance of my proposed study, in terms of professionals working collaboratively to promote preventive oral health for my population of interest.

In the other study, Isong, et al (2014) recruited parents of children aged 1-5 years in Chelsea, MA in order to explore the contextual factors contributing to the lack of dental care receipt among vulnerable children. The population described in this study relates to the population in my proposed study, providing me with additional insight on the issue at hand. Furthermore, the researchers adapted their interview questions from previous studies, hence had to pilot-test their guide. This again supported my choice to personally develop the interview instrument for the proposed study.

Lastly, in the study where the researchers only applied telephone interviews, Isong, et al (2012) studied parents of children aged 2-5 years with history of caries. The interviews helped to explore parental knowledge and their experience in managing their children dental care (Isong, et al, 2012). This study, along with the one above, indicated that the children population generally under study is 5 years old or younger. Although this might suggest that childhood caries start as early as in the infancy, it denoted the need to explore another subset of the population, such as children aged 5-10 years old, as indicated in my proposed study.

In all of these qualitative studies, the researchers employed a thematic analysis to analyze their data. Some of the common themes generated include: *lack of awareness,*

lack of knowledge of oral health, lack of access to oral health care and financial barriers. In sum, qualitative method seemed to the method of choice to effectively explore lived experience in depth. Also, the current body of literature denoted the investigation of oral health care on a large scale. Yet, with the identified gap in the literature, further phenomenological studies on oral health care and access were needed. Therefore, the qualitative paradigm was appropriate to explore the experiences of the underserved parents in the state of Massachusetts.

The Oral Health of Massachusetts' Children

In Massachusetts, the most common oral disease in underserved children is tooth decay. This condition affects those of racial and ethnic minority groups from areas of lower socioeconomic status (The Office of Oral Health, 2009). The Oral Health of Massachusetts' Children coalition reported that in 2008 approximately 41.5% of children from low-income families were with dental decay when starting kindergarten (Tri-County Collaborative for Oral Health Excellence (Tri-CCOHE), 2010). As for the third graders, over 60.8% from similar families were affected by dental caries (Tri-CCOHE, 2010).

The number of children enrolled in MassHealth dental program is significant (Better Oral Health for Massachusetts Coalition, 2010). This is a program for low-income residents. However, less than half of those children received any type of dental services within the year 2008 (Better Oral Health for Massachusetts Coalition, 2010). In terms of preventive measures to reduce decay, children in the state have limited access. Indeed, only 8% of Massachusetts' schools have dental sealant program since 2006 (Better Oral Health for Massachusetts Coalition, 2010).

In terms of receiving oral health care, there are certain geographical variations in the children population (Mandal, et al, 2013). In this case, underserved children in the state of Massachusetts are faced with the challenge of accessing (Isong, et al, 2014; Silk, et al, 2010). However, studies on oral health access for children in this state are quite scanty. Although several plans of action have been established by the Central Massachusetts Oral Health Initiative (CMOHI) to reduce the disparities in oral health care, there is still a larger gap to fill (Silk, et al, 2010).

Certain major barriers for parents involve ethnic and socioeconomic inequality, lack of dental insurance, lack of available oral health providers and inability to schedule appointment (Silk, et al, 2010). The latter is the result of providers not accepting MassHealth, a form of Medicaid coverage (Silk, et al, 2010).

The plan of action to improve oral health among the underserved children in the state of Massachusetts involves: 1) Increase oral health care access by increasing the number of dental providers caring for the underserved population, 2) Provide school-based dental services for underserved children, 3) Educate health professionals, particularly physicians about oral health fundamentals, so that they can engage their patients, especially the underserved ones (Finison & Schiavo, 2008). Therefore, assessing the underserved population of parents in this region helped me shed some light on what constituted the barriers to the oral health issue for their children and might help improve the children's oral health status.

Summary

Oral health is an important concept, particularly in children's lives. In order to maintain a good oral health, it is essential that children have regular dental visits and receive preventive services, including sealants and fluoride treatment, once their new teeth start to appear (Pourat & Finocchio, 2010). Children who receive preventive care along with oral education tend to require less complex procedures and treatment (Rajabium, et al, 2012). As for improving practices and effectively educating children about oral hygiene and care, oral health providers should consider the existing factors of beliefs, attitudes and behaviors faced by the parents of these children (Rajabium, et al, 2012).

Unfortunately, the underserved children's population is quite challenged in accessing oral health care. This problem may lead to infections and even detrimental health issue as they reach adulthood. Several family-related factors play a major role in this issue, including socioeconomic status, race and ethnicity, immigration status, and insurance coverage. Accessing preventive oral care with children is also dependent on culture (Pasaressi, Villena, van der Sanden, Mulder & Frencken, 2014). Infrequent or lack of childhood visits to the dentist is related to certain parental personal factors, such as the importance of oral health and their perceived responsibility (Pasaressi, et al, 2014). Thus, the level of awareness, attitudes, behaviors, socioeconomic status and more are determining factors of one's oral health (Chandra Shekar, et al, 2011).

And so, it was necessary to understand those barriers along with the parents' perceptions of their children's oral health. Understanding different cultures along with

different parental perceived barriers might help identify their effect on the youth's oral health. In order to achieve this, I delineated the methodological approach for this investigation in Chapter 3. In this chapter, I described the selected study design, the process for participant selection, data collection and analysis, along with the qualitative interview instrument that was used. I designed this instrument in order to better investigate the knowledge and perception of underserved parents in Massachusetts.

Chapter 3: Research Methods

Introduction

Although the extensive research literature was rich in information concerning socioeconomic factors influencing poor oral health in the underserved children population, there was a need for additional qualitative studies designed to investigate the barriers to oral health care access, as parents perceived them. The purpose of this proposed study was to give a voice to a sample of parents who experienced difficulties in accessing oral health care for their children and to determine the barriers to the oral health supervision of the children.

This chapter offers a detailed description of the study research design and rationale, including the research questions, my role as a researcher, the method for selecting and recruiting participants, data collection procedures, and a perspective on the strategies for data analysis. An overview of the issues of trustworthiness and ethical procedures are also presented.

Research Design

In this study, I employed a qualitative approach to inquiry, and began with assumptions and the use of interpretive/ theoretical frameworks. Such theoretical frameworks entailed the use of research problems addressing the meaning individuals or groups assign to a social or human problem. The purpose of the study was to explore the oral health care experiences of parents of 5-10 year old, underserved children residing in the state of Massachusetts, and place in evidence their perceived barriers in accessing

such care. Using this approach, I attempted to learn more about the participants' experiences.

The specific design for this study was transcendental phenomenology, with a focus on people's subjective experiences and interpretations of the world. This method involves grouping participant's own experience and acquiring data from several individuals who have experienced the phenomenon (Creswell, 2013). Some phenomenologists try to capture an understanding of how the world appears to others (Creswell, 2013). In doing this, they emphasize on describing what all participants have in common as they experience a particular phenomenon (Creswell, 2013).

During a particular research, as data is collected from those who have experienced the issue under study, a description of the essence of the experience is generated for all the individuals (Creswell, 2013). In this instance, the researchers may reduce the data into significant statements and quotes and combine them into themes. From these experiences, they may develop a textural description as to what the participants experienced, along with a structural description, in terms of the situations, context and conditions, eliciting the participants to experience the phenomenon (Creswell, 2013). A combination of the textural and structural description may help them express the essence of the phenomenon (Creswell, 2013). In this context, using the transcendental phenomenological approach to study on oral health care access helped me to explore the barriers in the lives of the parents of underserved children.

Rationale for Design

A transcendental phenomenological design was appropriate for this study, as it helped explore how parents' perceived the barriers to access to oral health care. This design was a logical fit for the study objectives and to capture the essence to which parents' perceptions influenced the supervision of their children's oral health. Moreover, this approach helped me generate a view of the oral health of children according to how the parents explained what they usually do to supervise them. Other qualitative forms of inquiry were considered for this study, including narrative, grounded theory, ethnography and case studies.

The narrative approach is a way of thinking about and studying experiences. When narrators tell a story, they project experience and meaning as they place characters in space and time to try to make sense of what happened or possibly what is imagined to have happened (McGaw, Baker & Peterson, 2010). With a narrative study, the procedures involve studying one or two individuals, and data is gathered through the collection of stories. Individuals report their experiences in a chronological order or in the order of life course stages, as well as provide the meaning of those experiences (Creswell, 2009). Although this approach seemed to correlate with the purpose of this study based on acquiring experiences from the story of participants, the phenomenological paradigm was the best fit because it considers several participants as opposed to simply one or two.

The grounded theory moves beyond a description of a phenomenon to discover or develop a theory (Creswell, 2013). It concentrates on formulating specific understanding, which would remain unexplained or implicit if the researcher did not perform an inquiry

(Egan, 2002). Although there may be some contextual influences when applying such approach, such as the effect of time and culture, grounded theory research has the ability to generalize findings (Egan, 2002). All participants in such research would have experienced the process, and the development of the theory might help explain its effects and stipulate a framework for further research (Creswell, 2013). Nevertheless, the phenomenological was more suitable for the proposed study rather than developing a theory from the findings, as entailed by the grounded theory.

The ethnography paradigm focuses on an entire culture, and the most common method of data collection is participant observation (Creswell, 2013). Ethnographic design allows the researcher to be immersed in the culture that is being studied as an active participant, which helps the researcher record extensive data (Creswell, 2013). Such observation helps the researcher to examine several individuals sharing the same process, action, or interaction, as they are located in the same place or have the same patterns of beliefs, behaviors and language (Creswell, 2013). However, for this proposed study, I did not focus on particular culture, rather I emphasized on a more heterogeneous sample to assess the phenomenon. Although culture, beliefs, behavior, and language seemed to constitute general barriers to oral health care access, a more personal perspective needed to be provided by the participants themselves, which might be different from these general factors.

Lastly, the case study approach involves the study of a case in a real-life, contemporary context or setting (Creswell, 2013). This type of approach helps the researchers to study complex phenomena within their milieu (Baxter & Jack, 2008).

Investigators can explore a case through detailed and in-depth collection of data, which may involve various sources of information (Creswell, 2013). It is a valuable method to develop theory, evaluate programs, and develop interventions (Baxter & Jack, 2008). Data collection for this study was primary data, meaning that the data came from one-on-one interviews with the participants; case study data are derived from secondary data sources. Therefore, the case study approach was less suitable for this study.

The phenomenological approach was used in this study, to help me emphasize the events and occurrences as participants experienced them, with minimal regard for external and physical reality (Hancock, 2002). With this approach, I was able to take into account people's perceptions, understandings, and perspectives of a particular situation. The specific constructs of this study included the oral health access and predispositions of Massachusetts' parents of 5-10 year-old underserved children to seeking care for them. In general, the phenomenological approach allows the researcher to gather deep information and perceptions through inductive, qualitative methods, such as interviews, discussions, and participant observation, and represents it from the perspective of the research participants (Lester, 1999). From the parents' stories, I identified conditions affecting their choices to have their children visit the dentist and seek oral care. The benefit of conducting a qualitative study was that it could help provide a deeper understanding and a more holistic picture of the study (Ary, Jacobs, Razavieh, & Sorensen, 2006).

Research Questions

Following the qualitative method, it was important to narrow down the purpose of the study to a more conceptualized and composed research question. Such type of

research is usually overarching, open-ended and non-directional, necessary to explore the central phenomenon. According to Creswell (2013), the intent of the overarching research question is to explore the issue at hand and illustrate participants perspectives based on the experienced phenomenon. Based on this explanation, the two overarching research questions fundamental to this proposed study were as follow:

1. How do parents of children ages 5-10 years old who self-identify as underserved explain the management of their children's oral health?
2. What are the perceived barriers for parents of underserved children ages 5-10 years old in accessing oral health care for their children?

Role of the Researcher

As a phenomenological investigator for this study on oral health care access, it was important to understand the vulnerability and stigma attached to the underserved population under study. It was necessary to take into consideration the difficulties and challenges that the participants faced and ensure that the study was undergone smoothly and efficiently. Therefore, throughout this investigation, my roles included that of a human instrument as an interviewer and an interpreter.

The Researcher as a Human Instrument, Interviewer and Interpreter

My ultimate goal is helping a large number of people, emphasizing prevention and primary care, and finding a way to stop the progression of numerous diseases that strike every day. I am a medical student being trained to become a physician. With the recent advances in medicine, I was inspired to take the ultimate responsibility, as expected by the medical community in order to save lives and improve human health and

wellbeing. During my training, I had the opportunity to conduct research and interact with numerous individual participants. Also, as a specialist in community health education, I am determined to be active in improving access to healthcare, as I advocate and provide support and care for those in need. Thus, my experience made me more comfortable in conducting this study.

During my experience as a research assistant, I assisted in research on a racially diverse cohort of poor and underserved adolescent and young female adults. Their opinion on the studied issue was valuable, in terms of helping health care providers find new strategies to better understand their needs and assess their challenges. I learned that the emotional and physical needs of the patients must be met to attain this goal. This experience made me equipped to conduct this research and assured that high research standards were respected and followed. With this initial research experience, I began contemplating the qualitative inquiry for my proposed study and examining the best approach to data collection.

In qualitative research, it is advantageous to understand the phases of data collection, because they are common to all forms of qualitative approaches (Creswell, 2013). Researchers may broadly organize the types of data into text data or images. These two forms can then be categorized in terms of types of information that researchers may collect, including open-ended observations, open-ended interviews, documents and audiovisual materials (Creswell & Plano Clark, 2011). A number of activities may engage the researcher then, in this procedure. These may include gaining access and making rapport, sampling purposefully, collecting data, recording information, exploring

field issues, and storing data (Creswell, 2013). During the data collection process, researchers may enter into the interviewee's perspectives, as qualitative interviewing starts with the assumptions that others' perspective is meaningful, knowable, and able to be made explicit (Patton, 2002).

Strong and effective interview strategies engage participants and encourage them to provide clear and useful information (Patton, 2002). As an effective interviewer, my role was to use open-ended questions and probes as to arrive at the deeper levels of the conversation, listen, build rapport and neutrality, and use appropriate body language. I kept in mind that the way questions were asked influenced the responses they generated. Body language also affects the type of relationship that is created between the interviewer and the participant. Investigator effects, such as personal biases and selective perception of observers, are likely to arise during research (Centers for Disease Control and Prevention (CDC), 2008). I was able to limit bias by using semi-structured and open-ended interviews.

The effectiveness of the interview is dependent on what is happening to individuals in the setting and how individuals are affected by the setting (Creswell & Plano Clark, 2011). When estimating the time for the interview, I considered the convenience of the participant, and how long conducting and transcribing the interview would take.

Data interpretation involves raising questions about the study and noting implications that could be drawn, without actually making those implications (Mills, 2006). I, therefore, interpreted the data based on the intimate knowledge and

understanding that I had of the contexts of investigation. The use of external sources also helped me draw the connections or support and highlight the unique findings. Overall, I sought to build a picture from the interview using ideas and the selected theory for the study.

Methodology

For the study, I performed the data collection process. The same procedures were applied at the selected urban health center. Prior to conducting the research study, I contacted the administrator of this facility in order to obtain permission to conduct the study. Moreover, since the research involved human subjects, I submitted Institutional Review Board (IRB) protocols to appropriate faculty for approval as required by Walden University.

Participant Selection Logic

The population for this study comprised of a diversity of parents of children ages 5-10 years old, from different racial and ethnic backgrounds, and residing in the state of Massachusetts. Participants were selected from a specific urban setting, health care center in this New England state. I chose this site because I could have access to the underserved population, which was needed for this study. There, I expected to gain high quality insights in order to broaden the understanding of the issue of oral health care access.

The sample size for this study was composed of a maximum of 20 parents of underserved children. The participants came from the aforementioned health center. This sample size was selected with the intent to clarify any relevant information for this study,

as in any form of qualitative research. Since my intent was not to generalize the findings as required by quantitative research, the small number of participants was appropriate to detect the emerging themes from each interview.

As part of the interview instrument, I included a demographic characteristics questionnaire (See Appendix A). This questionnaire was a form of screening tool to determine individual eligibility. The demographic data helped me screen the potential participants in order to allow further selection. This was to determine the underserved population, based on low or moderate socioeconomic status, low education level, low income, unemployment or unfavorable geographic residence, just to name a few.

Participant Sampling Strategies

Furthermore, there are no rules for sample size in qualitative inquiry (Patton, 2002). The sample size is dependent on what the researcher wants to know, the purpose of the study, what will be helpful, what is at stake, what can be achieved with available time and resources and what will have credibility (Patton, 2002). Conducting the proposed study generated conflict in time and resources. Thus, the smaller sample size was an appropriate strategy to counteract limited time and resources. This helped me to study a more open range of experiences for a smaller number of individuals, as I detected in-depth information. As long as the information obtained from the interviews was rich, a small number of participants was, therefore, very valuable. This effectively counteracted the exploration of a larger number of people where less depth is found from the phenomenon that the inquirer tries to document (Patton, 2002).

Moreover, in qualitative research, the concept of saturation regulates the majority of the sample size. Charmaz (2006) explained that smaller studies might achieve saturation quicker. However, some researcher may think they achieved saturation while unable to prove it. For instance, a researcher may think that just because a particular theme is repeated often during data collection, they may think that the study is saturated. Meanwhile, the actual data analysis may have or only been partially completed. Therefore, to avoid claiming saturation too early in the study, I ensured that data analysis was performed as I went along with each interview. For, as a researcher familiarize themselves, examine and analyze the data, new information may emerge, requiring additional data collection (Strauss & Corbin, 2006). Thus, I claimed saturation only after all interview data were analyzed and no additional information could be further extracted.

Inclusion and Exclusion Criteria

Continuing with the sample selection, this was also based on certain inclusion and exclusion criteria. In terms of the inclusion criteria, one male or female parent or legal guardian or caretaker, who was at least 18 years old but less than 65 years old, was required to participate in the study. Also, parents needed to have at least one child between the ages of 5-10 years old. Participants also needed to speak and understand English fluently and could be of any race or ethnicity, socioeconomic status, employment status and education level, in order to ensure diversity of the sample. These individuals had to reside either in an urban or rural area of the state of Massachusetts.

As for the exclusion criteria, the subjects were not eligible in this study if they were younger than 18 years or over 65 years and if they had children younger than 5

years old or older than 10 years old. Also non-eligible were those residing in a suburban part of the state or in a different state, those residing in a facility, such as prison, treatment facility, nursing home or assisted living facility, and those that were mentally disabled. Non-legal caretakers, non-English speakers and any of my potential students, subordinates, clients and potential clients were not eligible to participate in the study.

Participant Recruitment Strategies

Prior to starting data collection, I created a poster about the study and displayed it in the lobby of the health center. This helped individuals to have a general idea about the study. Then, I invited participants using a flyer containing a brief detail of the study. In this case, I handed a flyer to adult patients coming for their routine check-ups, while they were in the waiting area. I prompted them to read the flyer and contact me if they needed further information.

Participants met the eligibility criteria once they showed interest, approached and/or contacted me, as I confirmed that they indeed had at least a child fitting the age requirement, that the participants were over 18 years old and that they resided in a rural or urban area of the state. I ensured eligibility once the participants completed the demographic characteristics section of the interview instrument, and they did not have any restrictions as described in the exclusion criteria (See Appendix A).

Instrumentation

For this qualitative study, the data source that was used was semi-structured, one-on-one interviews. These open-ended interviews allowed information to be gathered about individual parents in terms of their perceptions, attitudes, feelings, behavior and

prevention practices related to the oral health of their children. The interview helped me to answer the study research questions.

The interview protocol first involved developing an original interview questionnaire (See Appendix A). I developed this interview guide from reviewing previous research materials pertaining to the topic of oral health and according to the knowledge I gained from information obtained from the literature. It comprised a core list of open-ended questions and probes, which I modified during the interview, as to explore the emerging themes. In order to assure the content validity of this guide, I pilot-tested it at the beginning of the data collection process. Some questions that I considered for this instrument include the followings:

1) Have you ever visited a dentist with your child?
2) How often are these visits?
3) What are the reasons for visiting the dentist or not?
4) What makes it difficult to seek dental care with your child?
5) Can you elaborate on these difficulties?

The interviews offered information about the participant's knowledge of oral health and oral care, their prevention practices and their perceptions of, not only the causes of dental illness, but also of the barriers that impact access to care. For instance, interview questions 1-6 from the Experience section in the interview guide helped me to elucidate the first research question, noted: How parents of children ages 5-10 years old, who self identify as underserved explain the management of their children's oral health? Whereas questions 1-5 from the Perception section were aligned with the second research

question: What are the perceived barriers for parents of underserved children ages 5-10 years old in accessing oral health care for their children? Through this interview, some of the themes I investigated include: *Parental oral health experiences with their children, lack of oral health knowledge, children's access to dental services, difficulties to access to care*, and *parental concerns and attitudes*.

I encouraged the participants to relate the nature of their difficulties and draw on their experiences in seeking oral health care for their children, supervising and caring for them, as well as managing any dental conditions. In order words, participants were able to reflect on specific factors that influenced the quality of their children's oral care. I expected high quality insights in order to broaden the understanding of the issue. The important point was to capture and describe the phenomenon as it impacted individual's health.

Pilot Study Procedures

The purpose of a pilot study is to pre-test or try-out a particular research instrument in order to improve its internal validity (van Teijlingen & Hundley, 2001). Thus, I asked the interview questions, listed in Appendix A, of two eligible participants at the study site. Before each interview, I approached the participants and handed them a flyer detailing the purpose of the study. Upon acceptance of participation, I offered the participants an informed consent. The scope of the questions helped me focus the information provided by the respondents. The phenomenon of oral health care access and barriers were explored using the interviews to allow for elaboration and clarification.

Probing the respondents helped me gain better and clearer description of their experiences. I tape recorded and transcribed all the interviews and shared the results with the participants to ensure consistency of the information. I provided the participants with the opportunity to relay any gaps or suggestions that could help me improve the instrument and/or understand their experiences. Yet, the interview instrument did not need to be revised, since it met the objectives of the study.

Procedures for Recruitment

For this qualitative study, I used purposive and snowball sampling techniques, which allowed me to purposefully select participants and site that could provide the necessary information. In other words, I selected participants intentionally as to include those who have experienced the central phenomenon being explored in this study. These are non-probabilistic sampling techniques, as they involve selecting individuals who are available and can be studied (Creswell & Plano Clark, 2011). Also, these techniques help researchers to gradually select the cases simply based on their relevance to the research question and not due to their level of representativeness (Plano Clark & Creswell, 2008; Teddlie & Tashakkori, 2009).

Thus, I chose study participants that were able to contribute to finding the key barriers to the issue of oral health care access. The term appropriate to this is theoretical sampling, which emphasizes on sampling individuals that are capable of contributing to building the opening and axial coding of the theory (Creswell, 2013). The sampling strategies began with the selection and studying of a heterogeneous sample of individuals in the population.

In order to confirm or disconfirm the study findings, the relationship between sampling and research conclusions must be illustrated (Patton, 2002). Since the sample determined what I, the evaluator, had to say about the data, it was important that I sampled carefully and thoughtfully. Thus, the sample size is as equally essential as the sampling strategies. It is the collection of extensive details about each site or individual studied (Creswell, 2013).

The sample for this strand comprised of a maximum of 20 parents of underserved children, recruited from the site, as described above. Since the intent of this type of qualitative research was not to generalize the information, as required for quantitative research, this sample size helped me elucidate the particular and the specific about the study. According to Creswell (2013), such small number can provide sufficient opportunity to identify themes from each interview and conduct a cross theme analysis of the data.

Data Collection Strategies

I performed the data collection at the indicated health center. Before the study began, I contacted the health center's administrative personnel to ensure that a private space was available to conduct the interviews. The private area constituted of a room previously prepared for this task, upon any arrangement with the contacted personnel.

Since individuals in this setting could have experienced significant health stress during the time of the study and also since potential participants might have needed some time to think prior to making the decision to participate, I took certain measures to ensure proper recruitment. Therefore, I displayed a poster about the study in the lobby of the

health center. Then, I handed the research flyer to individuals as they came for routine check ups, while in the waiting areas of the health center. The flyer contained a brief detail of the study as well as my contact information. I prompted the patients to read the flyer and contact me if they were interested. As they did, I gave them a brief explanation of the purpose of the study and then asked them if they were still interested in participating. Also, I offered an incentive in the form of a $10.00 gift card, only for those completing the interview.

Upon agreeing to participate, the participant and myself moved to the private room, where I provide an informed consent along with detailed information as to ensure that the subjects understood what they needed to do and the time it would take to participate in the interview. Also, I gave the demographic characteristics questionnaire to the participant and asked them to fill it out, as to ensure eligibility to partake in the study. I conducted each interview, which lasted approximately 30 minutes. I audiotaped them using a tape recorder. Also, during the process, I ensured that I remained courteous, respectful and answered any questions that participants had.

Regardless of the approach use to collect data, researchers may face certain ethical challenges during data collection and management (Creswell, 2013). In order to avoid such issues, I transcribed the recorded data and stored it into a computer database with secure protocols to ensure confidentiality towards participants. I developed back-up copies of the computer files, while the actual interview questionnaires and audio files were secured for such purpose. In order to protect the autonomy of the informants, I assigned specific numbers to conducted interviews.

Data Analysis Plan

With data obtained from semi-structured, one-on-one interviews, the data analysis was based on thematic analysis method. For this method, I identified patterns of meaning across the gathered dataset as to provide an answer to the already formulated research questions (University of Auckland, nd). Using the NVivo computer-based software, I read and coded all interview transcripts in the style of a phenomenological approach. This style is appropriate for inductive data analysis (Kawulich, 2004).

The NVivo software was a great tool to help me with this data organization and management. With this software, I built a rigorous database for the gathered data. I used it to code data, as I looked at coded segments of the data within the context that it was explored. I was able to emphasize on the relationship existing within the data. According to Ozkan (2004), whether by performing cross-case analyses, reordering the codes and adding memos into the files, this is a great way to manipulate data. For instance, the search option of NVivo is indicative for the inquirer to explore complex ideas or hypotheses in a quick and easy manner (Ozkan, 2004). When it comes to saving time, the software can be used to automate and speed up the management of data as well as the analysis task. Basically, with this computer assist, I had the opportunities to see data from different angles within a matter of seconds.

Thus, the data analysis was only based on the obtained interview transcripts. Using the NVivo software, I created files from which the analysis was derived. The first step was to import the interview transcripts and save them in the database. Since the interviews had consistent structure, which means that the number of questions were the

same in all interviews, I applied the auto-code method. This method helped me select each question separately and arrange them so that the answers in all interviews could match each question respectively. This made it easier to apply specific codes after highlighting a segment from each answer, looking for particular themes. Also, with the system, I was able to develop distinct classification of the participants.

I was able to transcribe all data sources, including field notes, into raw data and catalogue the data to keep track of and understand the emerging patterns and themes. Once all data had been transcribed, I employed categorical strategies to break down the narrative data and rearrange them to produce categories that facilitated comparison. According to Teddlie and Tashakkori (2009), this would lead to a better understanding of the research question. Thus, patterns from individual interview were detected trough the process of familiarization, coding of data and the development and revision of themes. Per Mertens (2005), this method provides evidence reflective of broader perspectives. Kawulich (2004) explained that the themes could be then defined into four criteria: the emergence of themes from the data, their abstract nature, their patterns of recurrence and their levels of identification. Thus, I compared the themes with existing research as to provide resilience to the study. Basically, all the concepts were linked into substantive theories by creating codes, applying the codes to the text. Here, the software made it easier to code the data and helped me look at coded segments of the data within the context that it was explored.

The thematic analysis method emphasizes on identifying patterns of meaning across the gathered dataset as to provide an answer to the already formulated research

questions (The University of Auckland, nd). Since the purpose of the study was to determine the parents' barriers impacting the access to oral health care for their children ages 5-10 years old, this model was a best fit to help determining such perceptions. Based on their answers during the interview sessions, I grouped their explanations into categories as described above. In a similar study on "Dental Care Issues for African Immigrant Families of Preschoolers," Obeng (2008) also used this thematic analysis. Obeng (2008) reported working separately with a volunteer colleague to identify similar utterances in their data and put them under the same theme. She went a step further in establishing a discussion session with her colleague to make sure that they agreed on the identified categories (Obeng, 2008).

Issues of Trustworthiness

For this research, I followed certain procedures to assure accuracy of the study data. In order to ensure the credibility of the research, I used progressive subjectivity and member checking. Per Lincoln and Guba (1985), consistency is assessed through member checking. Thus, I allowed participants the opportunity to validate their statements and modify any potential misinterpretations. Also, I summarized and clarified statements to ensure that I was actually capturing the participants' voices. I performed this technique throughout the interviews, by repeating information to the participants to clarify that I was portraying the participants' voices in a credible and reliable manner. Basically, I performed this method during each interview and at the end of the interview

Furthermore, in order to establish trustworthiness, the research findings should accurately reflect the situation and be supported by evidence (Guion, Diehl & McDonald,

2013). Throughout the research process, I kept a journal of my thoughts, feelings and reactions as to better expose, acknowledge and monitor my personal views and bias. This was to mitigate the impacts of my personal experiences and beliefs on the data. I also had the data reviewed by the chairperson to indicate something of the personal style of the researcher. This was to ensure reliability of the data.

Moreover, participant validation can be obtained by eliciting their views on the research as to learn how they see the researcher, the process of research and the accounts it has generated (Rajendran, 2001). Thus, I discussed the results and interpretation of these results with the chairperson, of different background and experience. For, it is important that the review of the conclusions is genuinely critical (Wilson, 1999).

When qualitative interviews are used to investigate a research question, this allowed readers and other researchers to accept the reliability and validity of the data (Creswell & Plano Clark, 2011). This means that collecting the data from various sources helps demonstrate comparability and consistency. Therefore, I presented a detailed and in-depth description of the setting, context, culture and time of the study so that other researchers could determine the degree of transferability between the proposed study and other populations.

Ethical Procedures

In order to ensure protection of human subjects, institutional review boards (IRBs) must approve the study. In this context, I submitted the study framework for review, as to seek approval about the exploratory stages of fieldwork, the procedures for assuring confidentiality of the participants and the availability of informed consent. IRB

approved the study on January 8, 2016 and the IRB approval number for this project is 01-08-16-0247189. With this approval, I was able to provide an informed consent to each participants before they were interviewed, in order to assure confidentiality of participants, appropriate for ethical requirements.

While I designed the informed consent to ensure that all participants completely understood the procedures, benefits and risks that the study entailed, this method is not without flaws in its practical application. One important concern that Escobedo, Guerrero, Lujan, Ramirez and Serrano (2007) had is the ample covert communication barriers residing between subjects and researchers that may give rise to misunderstandings. This issue prevents the subject from making the completely autonomous decisions required in the informed consent (Escobedo, et al, 2007). The majority of those barriers are associated with cultural aspects, such as language differences and religious beliefs (Escobedo, et al, 2007). Some others barriers are correlated to the trust that the participants have in science, such as false expectations (Escobedo, et al, 2007).

Thus, it is crucial for both researchers and participants to be aware of these types of barriers. The reason is that misunderstandings of the procedures can lead to subjects taking part in research projects, of which they do not approve (Escobedo, et al, 2007). This can have great psychological and physical effects on the wellbeing of the participants (Escobedo, et al, 2007). Therefore, it was ethical for me to account and correct for any misunderstandings and misinterpretations in the informed consent process, in order to treat participants according to required ethical standards.

Summary

This chapter delineated the research procedures adapted to the study on oral health care access. I provided a detailed explanation of the qualitative research design selected and a rationale for the phenomenological approach, appropriate for the study. I presented a sampling plan, study settings, procedures for recruitment, data collection and analysis methods, based on phenomenological approach to qualitative inquiry. I also discussed any potential bias and trustworthiness threats, and described a series of techniques, including the method of member checking, as to address these potential threats to the credibility of the research.

Furthermore, I included a detailed interview questionnaire in Appendix A and developed the informed consent that I used to recruit participants. Chapter 4 incorporated the results of this study, where I described all recorded data along with the method of analysis and a discussion of the results.

Chapter 4: Results and Analysis

Introduction

This phenomenological qualitative study focused on the specific barriers that underserved parents of 5-10-years old children faced when managing their children's oral health and accessing oral health care for them in the state of Massachusetts. Although many studies have reported the different disparities existing in oral health, notably lack of oral care services and poor dental care routine in children, the literature is lacking concerning the impact of parental perceptions about oral health care when it comes to their children's oral health in the state of Massachusetts. To understand the specific barriers for self-reported underserved parents, it is necessary to analyze their beliefs and self-efficacy in the supervision of their children's oral health. Specifically, this study aimed to fill this gap by: a) examining the reported experiences of Massachusetts underserved parents, b) determining the level of preventive oral health care among their children, c) exploring their perceived barriers to accessing oral health care with the children, and d) determining their perceived factors preventing them from seeking oral health care with the children and supervising their oral hygiene. The findings will be presented in the light of the two proposed research questions as follow:

1) How do parents of children ages 5-10 years old who self-identify as underserved explain the management of their children's oral health?
2) What are the perceived barriers for parents of underserved children ages 5-10 years old in accessing oral health care for their children?

This chapter is based on the previous chapters and presents and describes the

results of the collected qualitative data. The chapter begins with a description of the pilot study, building the foundation for the data collection strategies of the actual study. Next, a depiction of the setting is provided, detailing the environment where the study was conducted. A demographic section is also included, presenting the characteristics of each participant in the study. This profile will provide context for the research findings. The data collection and analysis are depicted, paying close attention to the strategies highlighted in Chapter 3. The results are provided as themes that emerged from the data, revealing the experiences, context, and substance of oral health care as perceived by participating parents. Potential trustworthiness and credibility issues are also discussed to verify and confirm the results. The chapter concludes with the study findings and a brief preview of Chapter 5, where the results will be discussed and their implications in terms of social change are examined.

Pilot Study

The pilot testing started on March 7, 2016 and ended on March 10, 2016. With the intent of improving the internal validity of the developed research instrument, I asked the interview questions listed in Appendix A of the first two eligible participants. This pretest was used to ensure that the questions were clear to the participants and that they could efficiently bring about information to answer the research questions. At the recruitment site, I approached potential participants and handed them a flyer containing a brief description of the study purpose and requirements. Parents who expressed interest were taken to a private room where they were screened to verify their eligibility. An informed consent was given to them, which they signed after the researcher's description of the

content of the informed consent and their understanding of the study purpose.

I recorded the interviews and the scope of the questions helped me to focus the respondents' information. Steering probes helped the participants elaborate more on the open-ended questions. The method of member checking allowed me to clarify any misunderstandings. According to Ulin, Robinson, and Tolley (2004), allowing respondents to relay any suggestions or gaps in the data is beneficial during the interview process and improve the instrument, if necessary. As I allowed my study participants to do this, it helped me understand their experiences better. All these combined techniques helped me gain a greater insight from the parents on what occurs at home during the children's daily routine and what happens when trying to access oral health care services.

Once I completed the interviews, I transcribed them by listening to the recorded interviews as soon as possible. The initial transcription for the pilot study was completed during the first week of recruitment. I assigned a number to each interview and kept the actual paper interviews into a locked file box, while the transcribed data were stored into a secure computer database. I judged the findings explicit and consistent enough in terms of the information provided by the participants. The conclusions drawn suggested that the information was relevant. The interview instrument did not need to be revised, since it met the objectives of the study. This allowed me to incorporate the data from the two pilot interviews into the actual study.

Setting

The health center used for the data collection is located in the Worcester County of Massachusetts, an urban community. Even those who are at risk of poor health

outcomes and chronic illnesses find assistance through a vast array of services including medical, dental, social services, optometry, health education and prevention, and much more. The health center hours of operation are Monday through Friday, from 7:30 AM to 8:30 PM and Saturday, from 7:30 AM to 1:00 PM. A diverse group of patients access the facility, since they reside within the different zip codes specific to this county, as seen with the study participants (See Table 1). The patients are from different ethnical, cultural, and linguistic backgrounds, such as North American, South American, Caribbean, African, Asian, Middle Eastern, to name a few.

Participants' Demographics

The study was limited to the parents of children 5-10 years of age, visiting the health center during hours of operation on the days when I was on site. Participants in this study represented several Massachusetts' cities from Worcester County, including Worcester, Clinton, and Fitchburg. None of the participants resided in a treatment facility, nursing home, or assistant living facility, and none reported having any mental disability. The majority of the participants, meaning 19 out of 20, were female, and only one of them was a male. They were all aged between 18 and 54 years old (Table 1).

In regards to their race and ethnicity, 13 participants reported to be Hispanic or Latino (Table 1). Yet, one out of these specified to be of Brazilian background and another one to be of Brazilian-European background. In the remaining seven participants, five reported to be Black/African American/Caribbean, one was White/Caucasian/Non-Hispanic, and one was Middle Eastern. Regardless of their background, all the participants were able to speak and understand English clearly at the time of the study.

In terms of marital status, five of the Hispanic, one of the African American and one of the Caucasian participants were single/never married. Out of the remaining eight Hispanics, five of them were married along with two African Americans and the Middle Eastern participant. The last three Hispanic and two African American participants were divorced/separated. Two Hispanics reported having one child, while seven others reported having two children living in their household. One other Hispanic had three children, two others had four children and another one had five children. Two of the African American parents reported having two children, while one other had three children, one had five children and the last one had six children. As for the Caucasian parent, she had two children, while the Middle Eastern parent had four children (Table 1).

Regarding education level, employment status, and yearly household income, two Hispanic parents had an Associate degree, but one was currently a student and had an income below $15,000, while the other was unemployed but looking for work, with an income between $35,000 - $49,999. Three other Hispanic participants reported having done some college studies but had no degree, while one of them was employed full time, with an income below $15,000; another one was employed part-time, with an income between $15,000 - $24,999; and the last one was unemployed but looking for work, with an income also between $15,000 - $24,999. Three other Hispanic parents had a high school diploma or GED, with one of them currently a student. Another one was unemployed but seeking employment and the last one was unemployed but not seeking employment. All three had a yearly income below $15,000. Four other Hispanics had done some high school studies but had no diploma. All four of them were unemployed,

while one of them was seeking employment but the others were not. All four had a yearly income below $15,000. The last Hispanic participant had a less than 9th grade education, was unemployed but was not looking for work, and had an income below $15,000 (Table 1).

In addition, out of the five African American participants, one had a bachelor's degree, was currently working full time, and had a yearly income between $25,000 - $34,999. Two other African American parents had some college experience with no degree, while one of them was currently a student with an income below $15,000, and the other was employed full time with an income between $25,000 - $34,999. Another one of these parents had a high school diploma, was employed full time, with an income of between $15,000 - $24,999. The last parent in this category had done some high school studies but had no diploma, and was employed full time, with a household income between $25,000 - $34,999. As for the only Caucasian participant, she had a less than 9th grade education, was unemployed but not looking for work, and with an income below $15,000. Lastly, the Middle Eastern parent had done some college studies but had no degree, and was employed full time, with an income between $35,000 - $49,999. In sum, the yearly household income of the participants ranged between $15,000 and $49,999 (Table 1).

Table 1

Participants' Demographic Characteristics (N = 20)

Participant	*Gender*	*Age Group*	*Race/ Ethnicity*	*Marital Status*	*Number of Children*	*Age of Children*	*Number of Children in Household*	*Education Level*	*Employment Status*	*Yearly Household Income*	*Geographic Location/ Zip code*
P1	Female	18-24	Hispanic/ Latino	Single/Never married	1	5 years	1	Associate Degree	Student	> $15,000	Urban 01605
P2	Female	25-34	Hispanic/ Latino	Single/Never married	2	3 & 7 years	2	High School Graduate or GED	Unemployed/ Looking for work	> $15,000	Urban 01610
P3	Female	35-44	Black/ African American /Caribbean	Married	6	7; 8; 12; 13; 16; 20 years	5	Some College, no degree	Employed, Full time	$25,000 - $34,999	Urban 01510
P4	Female	25-34	White/ Caucasian/ Non Hispanic	Single/Never married	2	10 & 13 years	2	Less than 9th grade	Unemployed/ Not looking for work	> $15,000	Urban 01604
P5	Female	35-44	Black/ African American /Caribbean	Single/Never married	2	6 & 13 years	2	High School Graduate or GED	Employed, Full time	$15,000 - $24,999	Urban 01609
P6	Female	35-44	Arabic	Married	4	2; 6; 11; 14 years	4	Some College, no degree	Employed, Full time	$35,000 - $49,999	Urban 01610
P7	Female	25-34	Hispanic/ Latino	Divorced/	4	7; 12; 15; 19 years	3	Some College, no	Employed, Part time	$15,000 - $24,999	Urban 01420

				Separated				degree			
P8	Female	25-34	Black/ African American /Caribbean	Married	3	3; 3; 5 years	3	Bachelor's Degree	Employed, Part time	$25,000 - $34,999	Urban 01604
P9	Female	25-34	Hispanic/ Latino	Single/Never married	1	8 years	1	High School Graduate or GED	Unemployed/ Not looking for work	> $15,000	Urban 01604
P10	Female	25-34	Hispanic/ Latino (Brazilian - European)	Married	3	3; 5; 10 years	3	Some College, no degree	Unemployed/ Looking for work	$15,000 - $24,999	Urban 01605
P11	Female	25-34	Hispanic/ Latino	Married	5	1.5; 3; 5; 7; 12 years	4	Some High School but no diploma	Unemployed/ Not looking for work	> $15,000	Urban 01605
P12	Female	25-34	Hispanic/ Latino	Divorced/ Separated	2	7 & 13 years	2	Some High School but no diploma	Unemployed/ Looking for work	> $15,000	Urban 01607
P13	Female	35-44	Hispanic/ Latino	Single/Never married	4	3; 5; 8; 16 years	3	Some High School but no diploma	Unemployed/ Looking for work (Student)	> $15,000	Urban 01605
P14	Female	25-34	Hispanic/ Latino	Single/Never married	2	2 & 6 years	2	High School Graduate or GED	Student	> $15,000	Urban 01605
P15	Female	18-24	Hispanic/ Latino	Divorced/	2	6 & 7 years	2	Some High School but	Unemployed/ Looking for	> $15,000	Urban 01608

				Separated				no diploma	work		
P16	Female	35-44	Black/ African American /Caribbean	Divorced/ Separated	5	12; 10; 6; 3 years & 1 month-old	5	Some High School but no diploma	Employed, Full time	$25,000 - $34,999	Urban 01605
P17	Female	35-44	Hispanic/ Latino (Brazilian)	Married	2	10 & 8 years	2	Associate Degree	Unemployed/ Looking for work	$35,000 - $49,999	Urban 01604
P18	Male	45-54	Hispanic/ Latino	Married	2	13; 8 years	2	Less than 9th grade	Unemployed/ Not looking for work	> $15,000	Urban 01605
P19	Female	25-34	Hispanic/ Latino	Married	2	7 years; 1 month	2	Some College, no degree	Employed, Full time	> $15,000	Urban 01510
P20	Female	25-34	Black/ African American /Caribbean	Divorced/ Separated	2	8; 1 years	2	Some College, no degree	Student	> $15,000	Urban 01604

Data Collection

Data collection began after IRB approval on January 8, 2016 and when the manager of the health center contacted me, stating that everything was in order to start the procedure. The IRB approval number for this project is 01-08-16-0247189. Participant recruitment began on March 7, 2016 and ended on March 25, 2016, three times a week on Mondays, Thursdays and Fridays, between 1:00 PM and 5:00 PM. I arrived at the health center on a Monday and displayed the study poster in the lobby of the facility, giving people an overview of the study. In the waiting room, I handed the research flyer to patients while they were waiting to be called for their appointment. I prompted the patients to read the flyer and contact me if they showed interest. Then, I guided each interested participant to a private room reserved for the study, handed them a copy of the informed consent and explained the details of the study, as described in the document. I ensured that the participant understood the purpose of the study and asked them to sign a copy.

Twenty patients meeting the criteria of the study decided to take part in it. I was courteous, respectful and answered any questions that the participants had and ensured that the interview protocol described in Chapter 3 and the pilot study were followed. Each interview was recorded and lasted approximately 30 minutes, from the time the informed consent was read to the time the participant received their incentive; this period was less than the duration anticipated, which was 45 minutes to 1 hour. I asked the participants to complete the demographics section of the instrument on their own. Two participants were leaving for work and decided to give their consent and agreed to conduct the study over the telephone, at a later date. During the telephone interview, I

also asked the demographics questions. I had no problem following the interview guidelines and probed the participants accordingly. Five other parents showed interest and wanted to participate. However, every time I reached out to them, they were unavailable. Therefore, I could not proceed.

Each interview form was assigned a number according to when the participant was recruited. In order to avoid any ethical challenges and uncertainties, each interview was transcribed and stored in a secure computer file along with the actual audio files. The paper interview questionnaires were kept in a locked file box. Also, I refrained from including any identifier pertaining to the participants, whether on the paper instrument or the transcribed version. Back up copies of the files were developed and stored accordingly. As part of maintaining the confidentiality of the participants, a code in the form of a letter and number was assigned to each interview, which was also helpful in displaying the study findings.

Data Analysis

As described in Chapter 3 and in the interview instrument, the interview questions were grouped in accordance with the two research questions (See Appendix A). For each research question, there is a series of interview sub-questions capable of answering each of the research questions. I arranged the sub-questions so that the answers in each interview could match each question respectively. The objective of the thematic analysis was to draw explanations about how the phenomenon of oral health care is experienced by underserved parents. I performed the data analysis of the 20 interviews using the version 10.2.2 of the NVivo qualitative software. Following the transcription, I imported each interview transcript and saved them in the database. Under the guideline provided

by Kawulich (2004) and Teddlie and Tashakkori (2009), I coded each transcript according to the phenomenological approach, which was necessary for inductive data analysis.

The coding method was performed to organize the statements into themes, categories, and subcategories so as to describe the experiences and perceptions of the participants. Based on the types of information provided by the respondents, codes were created using segments of the data. As the codes became more relevant and themes started to emerge, I classified them into categories, in order to provide context for the data and to distinguish the interaction and relationship between the codes. The themes that emerged frequently throughout the data helped me develop larger categories. Other similar concepts that were linked to these categories were placed under sub-categories. This helped me in expanding beyond the key phenomenon, as to determine conditions, strategies used and their consequences on the participants. Also, I developed some descriptive memos in the files to guide me and to clarify and expand on key concepts. This process continued until I reviewed all transcripts and reached saturation.

Vague, overlapping, and inexplicit statements were eliminated, as they were not necessary to understand the phenomenon under study. A total of 107 codes were created, which were clustered into seven categories and 20 sub-categories. Table 2 displays the categories, subcategories, and the frequency of coded segments. I then relayed all identified codes, themes, and categories to the dissertation chairperson in order to gain further feedback and insights.

Lastly, the thematic analysis process continued into unifying the key concepts and themes and generating an explanation about the level of oral health supervision among

the children and the barriers of dental care attendance. The patterns from individual interview facilitated comparison and further explanation of the phenomenon, which led to a better understanding of the research questions.

Table 2

Key Categories, Sub-categories and Themes

Categories	*Sub-categories*	*Frequency of Coded Segments*
	Frequency of Practices	19
	Oral Hygiene Methods	21
Oral Care Routine Practices	Issues with Practices	26
	Lack of Expertise	7
	Parental Involvement	12
Children's Oral Health Problems		46
Children's Knowledge		2
	First Dental Visit	29
	Last Dental Visit	32
Dental Care Attendance	Frequency of Dental Visits	23
	Parental Reasons for Visits	55
	Children's Experience with Dentist	50
	Treatment Needed	16
Type of Dental Coverage		17
	Parental Perceived Barriers	62
Barriers to Dental Care Attendance	Parental Greatest Barriers	17

Parental Views	Parents' Voice	13
	Parental Knowledge	9
	Parental Unawareness	3
	Parental Attitudes	46
	Parental Beliefs	10
	Parental Concerns	30
	Parental Expectations	1

Evidence of Trustworthiness

In order to maintain the credibility of this qualitative research, I followed the guidelines outlined in Chapter 3. I requested permission from the Quality of Care Committee of the health center prior to conducting the study through a Research Proposal Questionnaire in August 2015 (See Appendix B). The Committee granted final approval in January 2016 (See Appendix C). As part of the agreement, I was given access to a private room in the facility to conduct the interviews.

Trustworthiness was assured through following the interview process, progressive subjectivity, member checking, and saturation of the data. Following the interview process, I ensured that all participants understood and agreed to the study requirements, without any flaws in its practical method. Throughout the process, I consistently performed member checking, to allow participants to validate their statements and alter any misunderstandings. Although certain themes were repeated often during data collection, I achieved saturation only after recruiting the last participant. New information even emerged after analyzing some of the repeated themes. And so, as a way

to prevent claiming saturation too early, I interviewed all the initially suggested 20 participants.

Transferability of the study was ascertained with rich and detailed description of the setting, context, culture and time of the study. All interview transcripts displayed the context and participants' state of mind and emotional expressions during the interview process. The description of participants' experiences might allow the reader to determine whether the conclusions drawn were clear and applicable to the parents' specific situation.

In order to establish dependability of a research, researchers must ensure that the findings accurately reflect the phenomenon under study and are supported by evidence (Guion, Diehl & McDonald, 2013). Thus, I transcribed all interviews by listening to the audio file of each interview, and by writing each statement word for word. I coded all transcripts for emerging patterns, themes, and categories. I also had the data reviewed by the dissertation chairperson to demonstrate comparability and consistency.

To assure conformability of the study, I acknowledged and monitored any personal views and bias. And so, I kept aside any relevant personal feelings, reactions and beliefs from the data, which allowed me to identify new and unexpected findings as they emerged.

Results

The results section of this study is organized based on the two overarching research questions. Each research question is described with relevant codes and themes appropriate to provide clear and concise explanation about the level of oral health care management in 5-10 years old children and the specific barriers to dental care attendance

as perceived by their parents.

Research Question 1: How do parents of children ages 5-10 years old who self-identify as underserved explain the management of their children's oral health?

This research question focuses on the level of supervision that parents offer in regards to their children's oral health. The following interview questions helped me capture the essence of their experience and understanding of their children's oral health:

3) What is your child daily routine for dental care?
4) Have you ever visited a dentist with your child?
5) When was the last time you visited the dentist with your child?
6) How often are these visits?
7) How many months would you say have passed since your child's last dental visit?
8) What were the reasons for taking your child to the dentist in the past?

   Probe: Did you go with your child for regular check-ups or when he/she had a problem?

   Probe: What is the reason for choosing regular check-ups?

   Probe: What kind of dental problem did your child have?

Research Question 1 Results: Parents' Management of their Children's Oral Health

I asked these interview questions of each one of the 20 participants based on their own perspective. Per the description they provided, a series of themes emerged from the parents and children's experience during the daily routine at home along with their attendance to dental services. The followings are the categories sub-categories and key themes that explain the management of the children's oral health (Table 3).

Table 3

Oral Care Routine Practices (A)

Sub-categories	*Key Themes*	*Number of Responses*	*Selected Segments*
Frequency of Practices	Frequent	15	Morning…brush the teeth. Afternoon, if we can. And then, evening, before bed.
	Not frequent	5	That's really difficult. I try her to wash her mouth on the mornings and the night. Usually in the morning, she'll do it. In the night, sometimes.
Oral Hygiene Methods	Toothbrush	20	Daily routine. Early in the morning, make sure they need to brush their teeth.
	Floss	10	The mouthwash. He flosses from time to time but not every day.
	Mouthwash	11	But, the floss, not every time. But, we use the mouthwash every time.

Oral Care Routine Practices

Frequency of Practices

Ten out of the 20 parents described their children's daily routine as being done "twice daily". They explained that their children brush their teeth in the morning and at night (Table 3). P13 stated:

> They brush their teeth, obviously, when they get up in the morning. They eat breakfast. And before they go to sleep, they brush their teeth.

Three parents reported their children performing this task "three times" during the day. P17 recalled:

> They brush their teeth early in the morning when they wake up and every time they eat, they have time or we are around, they brush their teeth again. Like, when

> they're in school, they don't have time to brush. But, when they get home, they have to brush their teeth. I usually say three times a day.

Although one parent mentioned that her child brushes regularly "in the morning, at night and sometimes in the afternoon", four others reported it being done in the morning and on occasion, at night. P8 explained:

> He wakes up in the morning; first, he brushes his teeth. And then, about 70% of the time at night, he brushes his teeth. But, not every night.

While one parent mentioned that her child brushes up to "four times a day, every times he eats", another parent report it to be difficult for his son to keep it up for once a day. P18 stated:

> [He] hates cleaning. Sometimes, I have to tell him "Papi, it's time to clean your teeth before you go to school." Because he likes to eat, sometimes, first and then, clean.

Oral Hygiene Methods

All the parents reported that their children brushed their teeth (Table 3). Yet, when prompted to say if they used other methods during the routine practices, such as dental floss and mouthwash, all parents' responses varied. In the case of dental floss, none of them reported the use of it all the times after tooth-brushing. In fact, only 10 of them said that their children used it, but only once a day, either in the morning or "when they eat meat." P5 stated: "They don't floss. I don't like, they don't like to do that." P15 went further in explaining:

> Not all time. Sometimes. I tell them to floss all time. But, I guess for him, it hurts him. For her, she starts bleeding. And then, I don't know. I tell them they have to do it at least once a day. But they don't. At least at night time. Sometimes they want to do it, sometimes they don't.

As for the use of mouthwash, only one parent reported that their child used it every time they brushed their teeth. Only 11 others reported their children using mouthwash once a day. P17 recalled:

> Sometimes, once in a while. They use my mouthwash, which is Listerine or whatever I have at home for me. They just go ahead and use it for them too.

Issues with Practices

Nonetheless, both parents and children have issues performing some aspects of the daily routine (Table 4). For the children, the problems emerged because they "refuse to brush," or "refuse to floss" or because they "cannot floss on their own." And so, seven parents reported that their children refuse to brush their teeth. Some referred to it as being "a constant battle." P8 described the experience this way:

> Seriously, with this child, he always, like…Him brushing his teeth at night, for some reason, it's a struggle.

Similarly, P19 explained her frustration in this manner:

> I have to be every time "Anna, come on, brush your teeth." Every time, every time, every time. So, that's my problem with her.

Meanwhile, six other parents relayed their difficulties in terms of the children

refusal to floss. P13 stated: “He doesn’t let me. He fights.” On the other hand, three parents expressed their personal fear in performing this task. P3 described her concern this way: “I feel like they’re going to hurt their gum. That’s why I don’t let them do it.” And, P8 simply summed up her behavior as follow:

> Well, I haven’t because the one I have is the one with the sharp edge, so I always do it for him. Yes. And then, we only…we floss within the day, like, after he finishes eating. Even if he’s not going to brush his teeth and I realize that there’s food…I’d rather use it at that time, but not do it…

As for the inability of the children to use the dental floss, four parents explained this issue, which is the result of the parents not yet teaching them how to do it. In this instance, P17 mentioned:

> It’s just because I’m not around that much and I’m afraid they’re going to hurt themselves with the floss or something like that. So, I…really personally don’t like them do it.

For the parents, the main issue in terms of the oral care practices seemed to be the “lack of time.” Indeed, three parents reported their difficulty in supervising their children. P10 expressed her experience this way:

> When they’re in school, they’re in school. When they’re home, because of their history, sometimes it’s hard to keep up as you try to do their daily routine yourself at home, and making dinner, you know. Sometimes, most of the time, I don’t get to it ‘til night. And there’s times that it’s so busy that at night time, you know,

when you have thee kids, and you have especially one that is like 20 kids, it's like who goes in first.

Table 4

Oral Care Routine Practices (B)

Sub-categories	*Key Themes*	*Number of Responses*	*Selected Segments*
Issues with Practices	Refuses to brush/floss	13	They don't floss. I don't like, they don't like to do that. Even her, I need to brush her teeth.
	Unable to floss	4	He can brush his teeth. He just can't floss on his own.
	Lack of time	3	She goes to school in the morning, come back at 3:30. When she's back at 3:30. 3:30, sometimes she has program after school; she came around 4:15. After I give her food I brush her teeth. But, usually I'm not home at that time.
Parental Involvement	Brushes child's teeth	3	I have to brush her teeth. So, it's like a constant battle, all the time.
	Flosses child's teeth	6	When he gets up, he brushes them. I floss them.
	Teaches child	2	I'm trying to…to teach her every day but, you know…
Lack of Expertise	Parent's inability to floss	3	I never tried for her. I see that little thing, I don't think…I cannot do it. I feel like they're going to hurt their gum. That's why I don't let them do it.

Parental Involvement

In terms of parental participation in the daily routine as to ensure that it is done properly, 10 parents indicated their involvement (Table 4). Whether it is to brush their

children's teeth (*n*=3), floss them (*n*=6) or use the mouthwash (*n*=1), all of these reported doing it at some point. One parent even mentioned that the grandmother also took part in this process. And, to illustrate this, P16 explained:

> Sometimes he does [floss] on his own. But, usually I do it for him. He has siblings, so he usually sees them do the same thing and he'll do it too.

A few other parents explained that they actually teach their children how and why they should perform their daily routine practices. In this context, P20 reported:

> I educate him on why he should brush his teeth. Cause if he's not brushing his teeth, his teeth is going to have a bad odor…everything…and you don't want to have that.

Lack of Expertise

Again in the idea of oral care practices, inexperience also plays a role (Table 4). In fact, the children's experience performing some aspect of their daily routine has already been above. Yet, this inexperience was also seen among the parents. Three of them reported their inability to use the dental floss on their children. P14 expressed it as follow:

> No [I don't floss] because he bleeds. I feel like I'm hurting his gums. Cause I don't know how far to go.

Dental Care Attendance

First Dental Visit

When it comes to taking their child for their first appointment to the dentist, all but one parent reported having done so (Table 5). Eight parents conveyed that they started taking them to the dentist at the age of one year. P2 described her first visit with

her children:

> The first time…when they turned one, they do the first fluoride. So they've been, first day until now. Up-to-date, yeah.

Four other parents mentioned that their children's first visit was when they were about two-years old. While five others began this process when the children reached three years of age. Two parents reported taking their children at the ages of four years and five years, respectively. However, another parent mentioned her delayed in the process. P11 explained her inability to take her own to the dentist: "She hasn't…gone to the dentist. Every time I was going to take her, she didn't want to go."

Table 5

Dental Care Attendance

Sub-categories	*Key Themes*	*Number of Responses*	*Selected Segments*
	No attendance	1	She hasn't…gone to the dentist…Every time I was going to take her…she didn't want to go.
First Dental Visit	Early attendance	12	I might say about seven months. Yes. Either one year or seven months.
	Late attendance	7	I bring him…the first time…it was like…maybe…maybe five, I don't know. Yeah. I think maybe five.
	Very recently	5	They jus went last month. t's just one month for him. Well for both.
Last Dental Visit	Recently	13	She's actually due on the first. So, 6 months ago.
	Out-dated	2	The only one time I went to the dentist, it was, like…my son, the oldest one. He

			was four-years old. Like…three years.
Frequency of Dental Visits	Quarterly	3	Twice a year, for the older one and three months for the younger.
	Semi-annually	16	I would say every six months since his first tooth came out.

Last Dental Visit

The majority of the parents in the study were proactive in terms of keeping up with their children's dental care visits following their first appointment (Table 5). Most of them reported their last routine visit between a few weeks and seven months, from the time of the study (*n*=18). One parent explained the circumstances surrounding her delayed visit, since it has been about a year. P10 stated:

> It's been so far a year. Usually I don't let it pass that. But, it's been…it's going over a year. I just…cause I'm new here in Worcester. So, I'm still even trying to get settled here with this clinic, so…

Nonetheless, one other parent conveyed her great difficulty in taking her child. This resulted in delayed her visit by three years. P11 explained: "The only one time I went to the dentist, it was, like,…my son, the oldest one. He was four-years old."

Frequency of Dental Visits

Most of the parent reported having routine cleaning scheduled for their children every six months (*n*=16) (Table 5). With the exception of the parent that has not been to the dentist with her child within three years, the remaining ones (*n*=3) have seen the dentist every two or three months. The reasons of these frequent visits are because the

child has psychiatric issue, or because they have dental issues that require follow-ups or just fluoride treatments. P2 tried to clarify this as follow:

> Well, my oldest is every, I think, month, every two months, something like that, when it's just for the fluoride. But my oldest one has a cavity. So, he has an appointment today. It's not usually every month. But for the past, it's going to be the second month for me going this time. Because they're going to do…they're going to check that cavity that he has.

Parental Reasons for Visits

Most of the parents seemed to understand their children's needs, in terms of having to rely on the dentist for matters beyond their own capacity (Table 6). And so, for this study, there were two specific categories of reasons why parents sought the dentist with them. These were for either "preventive measures" or to "address a problem/ emergency." When it comes to preventive measures, the main reasons were "to keep children's teeth healthy" (*n*=5), "for good hygiene" (*n*=4), and "for routine cleaning" (*n*=6). P20 explained her decision:

> I don't want to have them have any…enamel on their teeth, any tooth decay or something. Cause, with the baby, she tries to have a bottle at night. So, I don't want her to have any kind of…residue left on the teeth I don't know about or, things like the toothbrush would not take off…So, I let her visit the dentist. Cause they're teething, and if you have teeth, there's possibility of enamel or…tooth decay or these things on your teeth. So, I make sure to get everything out there, I mean, I know about. So, they have healthy teeth.

Yet, other parents have had different experience in this matter. Thus, their particular reasons were often to address a dental problem or a possible dental emergency with their child. The specific problems included "cavity check" (*n*=8), "tooth extraction" whether of loose teeth (*n*=3) or a decayed tooth (*n*=1) or "to prevent further problems" *(n*=2). P17 explained:

> Because she has…the front teeth was really black, black. A lot of cavities. I really worried about it. And when she looked in the mirror, she said "Mommy, why are my teeth black like that?" I said that's cavity. I can't do nothing. When I go to the doctor, they told me I don't have to take it out because they're going to…they're small.

Table 6

Parental Reasons for Dental Visits

Sub-categories	*Key Themes*	*Number of Responses*	*Selected Segment*
Preventive Measures/ Cleaning	To keep children's teeth healthy	5	Because I want him to be healthy. His teeth…I don't want him to suffer from being, you know. I want him to take care of him and when he goes regularly to the dentist, he will be not afraid of the dentist. And he can sit on the chair and do his teeth so…And, he finds it, like, simple. When he sees me also, he can…he doesn't have fear from the dentist and from the tools, you know.
	For good hygiene	4	To keep their mouth, their hygiene, everything, their oral, everything clean. It's not just because…It's to avoid cavities, obviously. To avoid infections, gingivitis, plaques, tooth decay. All that good yucky stuff.

	For routine cleaning	6	Well, to make sure that everything is alright and to keeping track with the cleaning, you know, like…hum…to see how things are going. If they're dev…since they're a child…see if they're developing…their bones…the way they're biting and everything; it's…it's normal, you know. I just want to be aware of…that everything it's right; it's growing; they don't have any issues with things.
	For cavity check	8	What is the reason? Because Jason and Josh had a cavity. I noticed that they had something black and I knew that was a cavity, cause they didn't want to let go of the bottles. So, me, trying to get them to start drinking in a cup was very hard. So, hum…and that led to them getting cavity in the front. So, they only have one cavity.
Addressing a Problem/ Emergency	To extract loose teeth	4	This one, the oldest one, it's because she didn't like to take her loose teeth. So, I had to bring her in to take them out. Cause she was afraid to take them out. And…that's pretty much it. Just…either the cleaning or just that.
	To extract decayed tooth	1	To know what's going on with the teeth, you know, because some kids get lots of stuff in their teeth and you don't know. Like my son when he was younger, he had a lot of complications with his teeth. He had to go along surgery at the age of one and it was painful. So, it is a good thing to bring your child for check-up all the time.
	To prevent further problems	2	In the past, because it's crooked. His teeth was like…some was rotten…some was crooked. I also, like, want to know what's going cause every time he brushes his teeth…like, I used to buy the soft toothpaste, he bleeds. So, still, I have family that has, you know, gum disease, and I'm trying to…for the dentist people to catch it before it gets worse.

Children's Knowledge

When it comes to the children's personal knowledge about oral health and dental practice, one parent indicated that her children were able to step up and make certain decisions (Table 7). Whether it was to improve the daily routine or simply to avoid dental problems. And so, P10 proudly explained:

> Especially my oldest. She's 10. And, she's now learning how to do the flossing. He, however, is becoming very cautious. Cause he's learning that cavities are not good for your teeth. So, now he tries not to eat candy.

Children's Experience with the Dentist

Children display a variety of behavior when they go to the dentist. Indeed, parents' experience in this study revealed as much (Table 7). Whether the children demonstrated ease, comfort, or fear, each experience was personal. Six parents reported that their children actually behaved during their visit and actually liked it and two recalled them being comfortable. P5 conveyed her surprise:

> They feel comfortable. Like, my son, you know, when the kid is, like, younger, it's hard to deal with. But when he goes for dentist, even when he tries to get off track, they bring him back and say "oh, guess what we are going to do this." So, he feels comfortable doing it. And sometimes he'll be like "when am I going to the dentist, stuff like that?" He feels comfortable, yeah.

Nonetheless, the experience is not as pleasing for some others. Seven parents explained that their children displayed fear, whether because of "the doctor authority," the "mask" the dentist wore, the instruments the dentist used or "just the room" itself. One parent explained that her child "does not sit still because he has autism." Two other

parents stated that their children were quite terrified, while three others reported the children "crying, screaming, kicking, throwing fists, biting and playing martyr." P15 expressed this aggravation as follow:

> Since the first time I brought him, he was terrified. He's never want to open his mouth. They struggled with him to open his mouth. They…he's actually crying. When he started crying that's when they…they took advantage and they started doing the thing on his teeth…what's it called…well, whatever, what they put on his teeth.

Table 7

Children's Knowledge and Experience with the Dentist

Sub-categories	*Key Themes*	*Number of Responses*	*Selected Segment*
Knowledge	How to floss	1	Especially my oldest. She's 10. And, she's now learning how to do the flossing.
	About cavities and avoiding candy	1	He, however, is becoming very cautious. Cause he's learning that cavities are not good for your teeth. So, now he tries not to eat candy.
	Good	6	He really likes it. Last time, he told me he wants to be a dentist like his doctor because he likes what he gives him when he feels very happy when he cleans his teeth. He sees his teeth are white. Yes, he's happy with the dentist, yes.
	Comfortable	2	Cause he was very friendly with him. They make him feel comfortable, you know. They bring out some dinosaur there. There was talking, counting his teeth, made him feel comfortable.

Experience	Fearful	7	Oh. Every child, they all get scared, you know, like, pretty much. Especially when they have to do a cleaning and they see those tools and all the kind of stuff. But, other than that, it was good. They get a little scared when it comes to, you know, the machine and all the kind of stuff. Who wouldn't? I do.
	Terrifying	2	Oh, they don't like it. Especially my daughter. Ever since that incident, she is terrified; she's horrified. For the routine, for the cleaning, she was fine. Ever since that incident getting her teeth pulled out, she has fear. But, she still goes. But, it's to the point that…it's like if she'll never has to see them when she's ok, wouldn't do.
	Fighting	3	Every time I was going to take her…she didn't want to go. And she starts throwing her fists like…something like that. Well, with the first one, he just…he was ok with the brushing, but then…when he sees the tools that…they were going to count his teeth, he didn't want to. And he starts, like, to get really aggravated. And…when she told him to open his mouth, he didn't want to open it. And when he did, he bit her.

Children's Oral Health Problems

For many parents, having their children with dental problems is a major challenge. These problems include mostly cavities, loose teeth that take time to fall off, uneven disposition of teeth, "soft teeth," tooth decay and calcium residues on the teeth (Table 8). In fact, 12 out of the 20 participants mentioned that their children had at least one cavity. Some even explained that this might be the result of their children "sweet tooth" as they consumed a lot of candies, cookies, juices or sodas. P5 talked about her experience with her son:

> Like my son when he was younger, he had a lot of complications with his teeth. He had to go along surgery at the age of one and it was painful. Well, when he was one, before he could turn one he started having teeth. But is teeth were very soft. So, it's started cracking. And so, at that time he was not one, so I couldn't take him to a dental appointment because I talked to the doctor and he said he will soon be one so, you take him. So we set up an appointment when he was one. Then I went to the doctor to see. But, they wouldn't check his gum to check what's going on when it was later. They said it's soft, like juice is not good for his teeth. So, I guess the sugar in the juice it's just too much for him and messed his teeth up. He never drank soda. It's juice. So, I used to dilute the juice. But, it's still had effect with his teeth.

On the other hand, only a few (*n*=6) denied having any dental issues with their children. One parent was concerned about some calcium deposits, while another one had to experience the consequences of tooth decay with her son. P3 explained this unfortunate experience:

> Because he has…the front tooth was really black, black. A lot of cavities. He does. I…actually, he was like 3-years old. He was three. Because of that tooth, he was complaining all night, all night.

Treatment Needed

Although most of the parent reporting their children having cavities did not have to actually mentioned any treatment that was done, two of them stated that their children had fillings in their teeth (Table 8). While two others had their decayed teeth extracted, one parent mentioned that her child had had root canals performed. P7 described the

treatment this way:

> They do the root canals and they put all that stuff over… She used to have cavities? Like…one…two… and they put the white one. That's why you cannot see it. Because that one is the two root canals and they put that one that is silver. But, in the other ones that…they're later…they put, like, the white one.

Type of Dental Coverage

In order to seek dental care, one needs to have some type of dental coverage. For this study, all the parents reported having MassHealth, which is a type of Medicaid offered by the state of Massachusetts (Table 8). This coverage covers both medical and dental services. One parent, P20, explained that she "could not afford private insurance" because she was not working, which is the reason why she had this type of Medicaid. Yet, all of them also conveyed their concern, if they were not to have this coverage. They explained the difficulties they might encounter, if that should happen. All of them agreed that they would not be able to seek dental care with their children for, they do not have the means. P10 expressed her fear as follow:

> I would miss appointments. Anything that involves co-payments, you know, stuff like that. If I didn't have insurance, that's it. That's a big problem.

Table 8

Children's Dental Problems, Treatments and Coverage Type

Sub-categories	*Key Themes*	*Number of Responses*	*Selected Segment*
Dental Problems	No Problem	6	No. No problem. He has nice teeth.
	Calcium deposits	1	She has…it's only…it's like…[calcium deposits]…let me show you…that's what she has. Can you see?

	Cavities	12	Cause she usually has cavities. The one that's ten. Cause she usually hides the candy and she eats them all the time.
	Tooth decay	1	Because he is in very great pain at night. He has [four] cavities…decay. But, one is so deep that it's a decay.
Treatment Needed	Filling	2	She has three. I don't know if they did any like…you know…she has the three caps. I don't know if they did fillings. But I think, I don't know…she might have some.
	Root canal	1	They do the root canals and they put all that stuff over… She used to have cavities? Like…one…two… and they put the white one. That's why you cannot see it. Because that one is the two root canals and they put that one that is silver. But, in the other ones that…they're later…they put, like, the white one.
	Extraction of decayed tooth	2	Because she has…the front tooth was really black, black. A lot of cavities. He does. I…actually, he was like 3-years old. He was three. Because of that tooth, he was complaining all night, all night.
Coverage Type	MassHealth	20	No, [I wouldn't be able to afford dental care if I didn't have insurance]. Especially being a single mother with kids, that's difficult because you got bills to pay, you got rent and stuff. So, it's going to be very tough, like paying dentist for you and two kids. It's not easy.

Parental Views on Oral Health

In providing information about their children's daily routine, their experience with the dentist and the challenges encountered when seeking dental care services with them, parents in this study have different views, attitudes, concerns and suggestions. The

following sub-sections encompass these different views (Table 9).

Parental Knowledge

In regards to what parents know about their children's oral health and condition, some parents denoted their understanding whether about "what's happening in their child's mouth", as seen by P7 when her daughter lost a few teeth for quite some time but, they were slow to grow back (Table 9). She stated: "I know how log she lost her teeth;" or about **"**when to see the dentist", as P8 recalled: "Because I was told that once your child's first teeth comes out, he needs to see a dentist;" or even about **"**what is best for child from reading". In the latter case, P8 stated: "But, as you read, you get to know…you get to know the good things for your child."

In terms of optimizing their children's oral health, some parents offers their thoughts about their **"**food choices", as P1 mentioned: "She's not suppose to have any sweets, any chips or candy. Sugar-free;" Or about the consequences of not going to dentist, as P2 conveyed: "If I don't, it might get worse and it's only going to be worse when they grow old, just because they got problems."

Yet, the benefits of going to the dentist are highly rewarding, as viewed by P3. She expressed the importance of doing so:

> For me, to go to the dentist, it's really important because it's something like daily routine. But, I think you have to do it. Because that helps you. Even when you go to the dentist, you have a cleaning. After, you feel your mouth, like, really like, great. You feel…you understand what I mean?

Parental Unawareness

Yet, some aspects of dental care are unknown for some of the parents in this study (Table 9). For instance, for P10, she was unaware of "when to take her daughter to the dentist". She conveyed her confusion:

> Yeah. At that time, she was my first child. So, it's like "do I take them now? What age do you take them?" Especially when you're a young mother at that time. It's like "what do you do? At what age do you take them?"

As for P13, she was unaware of her daughter's "dental condition" since her teeth were not growing back for quite some time. She mentioned: "I didn't know until…until yesterday." She went further in saying:

> Well, yesterday, we were…it's funny…we were talking about taking care of the teeth and stuff like that, cause I talk to my daughter like my best friend. Because, I love my kids. And she told me…she's like: "Ma, I have these two teeth that fell out, remember?" And I said: "Yeah, I remember." She said: "Look!" And I looked, there's no teeth growing. And I said: "How come you didn't tell me that?"

Lastly, for P1, she was unconscious of the "effects of formula on her baby's teeth", which was the reason of her daughter having early cavities. She exclaimed: "I didn't know that milk could eat the teeth."

Parental Beliefs

Indeed, personal beliefs could have a positive or negative impact on how parents care for their children's oral health (Table 9). In this study, one parent explained her cultural views on oral health. P5 communicated her "cultural restraints" as follow:

> My culture is like, not every time you have to come to dentist, because sometimes, where I'm from, we believe it has to be very serious, you know, before…Just do your daily routine every day. But, like, every time you have to come for check-up, playing with your teeth, my culture don't accept that.

Yet, two parents reported that, although the cultural beliefs are there, they have developed some "assimilated beliefs", which elicited their adaptation in caring for their children's oral hygiene. P5 continued to say:

> Now the country I found myself in, we have to adjust to what we do. For me, I haven't been to the dentist forever. But for my kids, I have to do what's best for them even though the culture is there. But, the world we're living in, we have to do what's best for them because if there's any problem, you're going be held responsible and stuff like that. So…

Three other parents have their conception about the "cause of poor oral conditions". For instance, P8 thought that the consumption of "sweets" "gave him cavities." As for P3, "bad teeth are part of the cause of bad breath". Also in this context, P20 tried to explain her reasoning behind tooth decay. She relayed:

> I think their gum is not healthy yet for flossing, cause they may go deeper and…sometimes cause some tooth decay.

Two parents confessed that it was their "responsibility" to care for their children's oral health, as they would be held accountable if their children's dental conditions were to go sideways in the future. In this case, P18 stated:

> You know, you take care of your teeth. Because, if you don't do that, sometimes you get in trouble too because you're supposed to bring your kids to their appointments…to their…to everything, you know.

In terms of managing their child oral hygiene and accessing dental care services with them, one parent viewed this as more of a "personal decision". For P16, her decision comes from what she had been told. She explained it this way:

> The reason because…at childbirth, they always tell you, you should take your child for dentist…cleaning…at this age or at this stage for them. So, I just decided to take him for regular check-ups.

Regardless, not all parents viewed certain dental conditions as completely problematic. For P6, she reported that her son had a few cavities and yet she stated: "Only the cavities. Not really a big problem." As for P3, she considered it to be "too early for dental visit" when her daughter turned two-years old. She explained it like this:

> But, I like to go to the dentist because I was thinking two-years old is too early and I know she only have 20, 20 teeth. And I know they're going to change. I am not really worried about it. That's why. But, after that, I…

Parental Concerns

In this study, all the parents reported having MassHealth, as aforementioned (Table 8). Yet, 13 of them expressed their concerns about financial hardship, if they were not to have any dental coverage (Table 9). They reported that they would not be able to keep up with their children's dental care requirements. To illustrate this, P6 explained:

> No. It's too expensive for me because we are refugees, and you know. I start work since maybe two months, or one month. So, if I don't have insurance, I would not be able to go to the dentist.

In terms of "children not performing their daily routine," two parents expressed their concerns. For instance, P13 described:

> The concerns are like my daughter, she doesn't like brushing her teeth much. And, hum…I'm always has to be constantly on her, brush your teeth, brush your teeth, brush your teeth. And, she's complaining of her teeth hurting; all her teeth are hurting. So, I don't know what that means. But, when she came to get all her teeth checked, she has no cavities at all. Her teeth are healthy.

Aside from this, three parents reported being concerned about their "children's dental conditions." Indeed, P13 mentioned that her children complained that their "teeth were hurting all the time" and that her "daughter's teeth were not growing back" after the primary teeth had fallen off. For P17, the concern was more about her "daughter's uneven teeth", which might require "braces" in the future. As for P14, she was more anxious about the dentist's decision to remove her daughter's dental "caps," which were primarily put in place by another dentist. She explained:

> I'm concerned because I went to another dentist and they want to remove them. I want to know why they want to remove them. But, they say they're seeing something…on the inside.

Two other parents conveyed their worries about their children's health when it comes to their dental experiences. And so, for P12's autistic son, her concern was about

him not able to understand what was happening during the visits to the dentist. For P8, she was very anxious because she has been giving her son several pain relievers for a bad toothache. She expressed her frustration as follow:

> I've been giving…for months now, I have been giving him ibuprofen three times a day and I wasn't comfortable with it. I thought it was too much. I just wanted to come in, and then seek a professional; see if it was ok, if there's something else I could do instead of…

Lastly, two parents were concerned about "unavailability of specialized providers". P8 certainly complained about not having too many professionals able to provide special assistance and urgent care in extreme situation, such as that of her son with a bad toothache. Similarly for P11, her aggravating children impacted them from attending dental care. And so, her concern was to find a provider capable to sedate them and provide dental care to them. She explained it this way:

> I just want to get them…to see the dentist but…I just need, you know, a little bit of help…some place that actually…they would put them to sleep and it would be more easier for me, you know, for them to work on their mouth. And, if they have any cavities that need to be filling in, so, they would do that right away, you know. But, like I said, there's not a lot of places they do that…that I know of. I already talked to the pediatrician about that because…in order for them to put them to sleep, like, I have to speak with the doctor, and…she said that…they don't do that anymore.

Table 9

Parental Views on Oral Health

Sub-categories	*Key Themes*	*Number of Responses*	*Selected Segment*
Parental Knowledge	About what's happening in children's mouth	1	No. I knew how long she lost her teeth.
	About when to see dentist	1	Because I was told that once your child's first teeth comes out, he needs to see a dentist.
	About what is best for children from personal reading	1	[…] But, as you read, you get to know…you get to know the good things for your child.
	About food choices	1	She's not suppose to have any sweets, any chips or candy. Sugar-free.
	Consequences of not going to dentist	2	Cause sometimes if you don't go to the dentist, you get like cavities or something in your teeth.
	Benefits of going to dentist	1	For me, I think it's really important to go to the dentist. Even it's far or something, if I couldn't make it this time, I would call to make another appointment. I don't like to miss that kind of appointment. I don't like to miss it. Because I think it's important. Specially, I like to go to the dentist to control the cavities and then to, like, for the smell, something…
	When to schedule first	1	Yeah. At that time, she was my first child. So, it's like "do I take them now?

	appointment		What age do you take them?" Especially when you're a young mother at that time. It's like "what do you do? At what age do you take them?"
Parental Unawareness	About children's dental conditions	1	I didn't know until…until yesterday.
	Effects of formula on baby's teeth	1	I didn't know that milk could eat the teeth.
	Cultural restraints	1	My culture is like, not every time you have to come to dentist, because sometimes, where I'm from, we believe it has to be very serious, you know, before…Just do your daily routine every day. But, like, every time you have to come for check-up, playing with your teeth, my culture don't accept that.
Parental Beliefs	Assimilated beliefs	2	I'm not of that cultural background that…hum… will not allow me to do certain things with my kids. When it comes to health and oral hygiene, I think that we all…need it. It's not about your religion, your tradition or whatever. I want my teeth to be cleaned.
	Cause of poor oral conditions	3	For bad breath. I think it's really important. Like they told me the teeth not make you have a bad breath. But, for me, I think it's part of it though.
	Parental responsibility	2	You know, you take care of your teeth. Because, if you don't do that, sometimes you get in trouble too because you're supposed to bring your kids to their appointments…to their…to everything, you know.
	Personal decision	1	The reason because…at childbirth, they always tell you, you should take your child for dentist…cleaning…at this age or at this stage for them. So, I just decided to take him for regular check-ups.
	Cavities: Not a big	1	Only the cavities. Not really a big problem.

	problem		
	Too early for dental visit	1	But, I like to go to the dentist because I was thinking two-years old is too early and I know she only have 20, 20 teeth. And I know they're going to change. I am not really worried about it. That's why. But, after that, I…
	Financial hardship (if no coverage)	13	I don't think I could. I would try as much as I could but I don't think I…I would be able to.
	Children not performing daily routine	2	The older one…we have a problem. Cause, we got a poster on the wall that says brush your teeth in the morning, brush your teeth in the afternoon. But, I can still go back to the room and check and, it's not done.
Parental Concerns	Children's dental conditions	3	The only concern is that her teeth, like mine, it's like uneven and it's coming forward and…I'm going to have…we already have her checked. We are going to have her put braces on it. It's going to be ok, you know. The only thing that…that was the only major…concern. And then, she's…a little…she's young too. So, I'm going to see what we can do.
	Children's health	2	[…] He got autism, so he can't sit still for that. […] Before, it was difficult cause he didn't understand what it was.
	Unavailable specialized providers	2	Yes, it is a very big concern. I believe some dental issues can wait. But, a five-year old is in pain every, like, there and then he has to be on medicine before, like, on medication before the pain goes up. Some letter or in a 10 percent pain before he can get help unless like in months time. Then, it's a little…yeah…If there was to be like a place you could go to when it's an issue like that, something that really needs urgent care.

Parental Expectations	Children performing daily routine	1	Hopefully they brush their tongue, gargle, use the ACT rinse, you know, or kid's Listerine.
	Pleased	3	I really don't have much concern cause…my guess is that I try to keep everything up-to-date. So, nothing would go wrong from there, you know.
	Motivated	3	Definitely. Like tomorrow, I already prepare people to go with me to bring her and my, the other one.
	Observant	1	Sometimes, I let him…do it. I see him go…and take it…put it…and…
	Inquisitive	1	And I do that with my kids. I'll be like: "Anna, go brush your teeth." And when she comes out, "do they hurt? Did you bleed?" And she calls me and she said: "You always ask so much questions." I'm like: "I'm your mother. I'm supposed to know. Does anything hurt you? "Don't ask me that." She gets mad.
Parental Attitudes	Teacher	2	I educate him on why he should brush his teeth. Cause if he's not brushing his teeth, his teeth is going to have a bad odor…everything…and you don't want to have that.
	Adamant	8	Of course. Because I won't let my kids like that, you know…I'd find the money, you know, and pay, because….you know.
	Balancing	3	Sometimes, I got to balance it out…either me or daddy, you know. We got…we find a way to get here. We'll find away to bring them.

Attempting	2	Like, I'm trying to get them now, even though they're getting used to it. Some of the things they have told me is like…if they don't like the dentist to…work with their mouth…that…I should get…some place that…they would, like, actually put them to sleep and do whatever they have to do in their mouth. It's just…I don't know how…does it work before? Before…you know, it was common. They used to do it. But, now…there's not a lot of places that hey do that.
Exhausted	1	Sometimes it's hard to keep up as you try to do their daily routine yourself at home, hum, and making dinner, you know, sometimes, most of the time, I don't get to it 'til night. And there's times that it's so busy that at night time, you know, when you have thee kids, and you have especially one that is like 20 kids, it's like who goes in first. Even if it's shower time.
Struggling	3	I have to be every time "Anna, come on, brush your teeth." Every time, every time, every time. So, that's my problem with her.
Laid-back	3	Before two-years old I don't…I didn't bring them to the dentist.

Parental Expectations

Most parents, at some point, expect their "children to perform their daily routine", their daily oral care practices (Table 9). For this study, only one parent actually stated her expectations. Indeed, P10 mentioned: "Hopefully they brush their tongue, gargle, use the ACT rinse, you know, or kid's Listerine."

Parental Attitudes

In addition, most parents portray their attitudes and determination when managing their children's oral health (Table 9). In this study, three parents reported being "pleased" whether about their experience with their dental provider, as stated by P15, or that they "try to keep everything up-to-date," as P2 reported, or by their personal satisfaction about their children's dental management. For the latter, P3 exclaimed:

> I think I'm doing great. Because I did my job. I make sure they, even the boys, I make sure they brush. I bring them to the doctor all the time. If I have something before that, I bring them before the appointment or I call, something like that. I think it's really important. I don't have any concerns because that's something I really like to do.

Besides that, three parents were "motivated" in this instance. Just as P3 explained that she already had someone else ready to take her and her children to their next appointment, P16 explained her motivation to take her child to his dental appointment regardless of any coverage issue. As for P5, she became motivated after realizing the consequences of her child's poor oral health condition. For this, she recalled:

> When he was one year, front teeth was breaking and it was terrible. So, that's, you know, really motivated me, you know. This is good. If you just do it all by yourself, you don't know.

When describing the way his Attention Deficit Hyperactivity Disorder (ADHD) son behaved when practicing his daily routine, P18 denoted an "observant" role. He stated: "Sometimes, I let him…do it. I see him go…and take it…put it…and…" But, P13 seemed to be more "inquisitive" in this matter. She uttered:

> And I do that with my kids. I'll be like: "Anna, go brush your teeth." And when she comes out, "do they hurt? Did you bleed?" And she calls me and she said: "You always ask so much questions." I'm like: "I'm your mother. I'm supposed to know. Does anything hurt you? "Don't ask me that." She gets mad.

Besides that, two parents assumed the "teacher" role, in trying to elicit better oral health practices in their children, as reported by P19. Also P20 explained her role this way:

> Something like…something like…this is good…I educate him on why he should brush his teeth. Cause if he's not brushing his teeth, his teeth is going to have a bad odor…everything…and you don't want to have that. So, he walks to me and does it.

Eight parents explained the reason why they were adamant about their children's oral health. Just as P9 stated that she wanted the best for son, P13 and P18 were persistent

about their children practicing their daily routine. Similarly for P17, everything had to be on track, as she reported: “We are really picky about it. We’re very on top of…even though…that’s one of things we keep on track.”

In trying to manage their life busy schedule including school, work and meeting her children’s dental care needs, three parents described how they were “balancing” them all together. For instance, for P17, she shared the dental visits with her spouse, while P1 tried to schedule her daughter’s appointments on days that her child and herself were not at school. Likewise, P10 described her own balancing ways as follow:

> Usually, I put it after school or I put it on my day off or, like, on a better schedule for the both of us. Because they have to go to school too. I can’t take them off of school because of dentist. If it’s in the evening…maybe I’m working or they go to school. Make it…we just make it comfortable for us.

Two parents explained their attempts to ensure better oral health for their children. With her children refusing to visit the dentist, P11 reported her “attempting” method:

> Like, I’m trying to get them now, even though they’re getting used to it. Some of the things they have told me is like…if they don’t like the dentist to…work with their mouth…that…I should get…some place that…they would, like, actually put them to sleep and do whatever they have to do in their mouth. It’s just…I don’t know how…does it work before? Before…you know, it was common. They used to do it. But, now…there’s not a lot of places that hey do that.

Meanwhile, in attempting to control her daughter's diet in terms of reducing "sweets" intake, P1 explained:

> With the juice, I do zero sugar. There's like these little flavor squirts you just put in the water, squirt a little bit to add some flavor. She drinks that all the time with water. I barely give her milk. She doesn't really ask for it. She eats yogurt or something, something to fill in for that.

Having more than one child and trying to manage their dental health is hard for an "exhausted" parent as P10. She explained her hardship like this:

> Sometimes it's hard to keep up as you try to do their daily routine yourself at home, hum, and making dinner, you know, sometimes, most of the time, I don't get to it 'til night. And there's times that it's so busy that at night time, you know, when you have thee kids, and you have especially one that is like 20 kids, it's like who goes in first. Even if it's shower time.

Just like P13 and P18 reported "struggling" with their children as to ensure that they perform their daily oral care practices, P7 explained her mishaps as follow:

> So, I don't got the time to be, like, on top of her every day. When I can, I do it. But, not every day. I cannot do it every day.

Lastly, three parents portrayed a more "laid-back" attitude in their supervision. For instance, P3 did not see a reason to take her children to the dentist before they were two-yeas old. As for P20, she did not want her children to use a dental floss until "they

can feel comfortable themselves to go through with it." As for P11, dealing with her difficult children was a challenge, which was why she had not taken them to the dentist for over three years. And so, she explained her attitude:

> It's just every time I go to tell them they're going to the dentist, they do have a fit. And, it would be impossible for me to take them because either I would have to drag them or I would have to tie them up. And, I'm not going to do none above…none of those stuff.

Research Question 2 Results: Parents' Barriers in Accessing Dental Care with the Children

The second portion of the Results section is about the second research question, pertaining to the types of barriers parents have when seeking dental care with their children.

Research Question 2: What are the perceived barriers for parents of underserved children ages 5-10 years old in accessing oral health care for their children?

With the following interview questions, I tried to assess the perception of the parents in terms of gaining sufficient insight capable to answer the research question. They are as follow:

1) Tell me about your child's experience with the dentist?
2) What do you think makes it difficult to seek dental care with your child?
3) Can you elaborate on these difficulties?

   Probe: Can you afford dental care or do you have dental insurance for your child?
4) What do you think is the greatest difficulty to access dental care with your child?

5) What additional thoughts or concerns do you have regarding your child's oral health care?

Parental Perceived Barriers

As described in Chapter 2, there are a considerable number of barriers in the application of dental health care in the underserved population. These factors impact parents when it comes to promoting oral health for their children. For this study, the information that the 20 parents provided broadened my insights about such factors in much more details (Table 10). Tthe followings are a series of barriers that the parents noticed when they had to attend dental care services with their children.

Work Barrier

Six parents in this study noted that their work schedule had a great impact in accessing care with their children. Particularly, when it comes to requesting time off from work, as they do not always "get permission" from their boss. They also explained that they often miss appointment from running from work to their children's school and finally to their appointments. One of these parents even mentioned that sometimes when she is so "caught up with work", she has to call the dentist to reschedule. P20 described her constant battle when trying to keep up with her child's appointment:

> I think work. Work was one problem but, I mean, I always like…I'm one of the moms that always find time. But, I know that work is always one of the problems in getting your child to the hospital. Not only dentist, but to the hospital. I always miss appointments. Yeah. Running from work…between places. Running

between places is the problem. Maybe picking them up from school, to work and day care, is the problem.

Transportation Barrier

For this study, six parents conveyed their issues in terms of lack of transportation means, when trying to attend their children's appointments. They reported that they struggle when they do not have access to a car. Sometimes they may "not have gas" in their car, which often results in appointment cancellation. Other times, P18 stated that he had to walk to the closest facility. Yet, P7 explained this overwhelming situation this way:

> And I need to stop because the car broke. No way that I can go to Lawrence. If I want to pay a taxi for Lawrence, oh yeah! It's too much! I can't afford. I don't got the money to afford that.

Location Barrier

In terms of where the dental facility is located, this also impact parental attendance with their children. And so, four parents indicated that finding a location closer to them is challenging, particularly if they are pleased with the services offered at the facility they usually went to. P7 explained that certain services that her child needed required that she attended a different facility all the way in Lawrence. The distance was really a problem as she reported. Similarly, P6 described her experience with her son as follow:

> When you want to take your son by bus, it's too far for me. Because the dentist I choose speaks Arabic and he lives maybe one hour away from my home. I need to

> take two buses, you know, it's cold weather. So, sometimes I find it really difficult because the doctor is a very good doctor.

Provider's Approach Barrier

Four parents described their difficulties in terms of the dental professionals' approach when delivering services. They relayed that their experience was not to their satisfaction because of lack of friendliness and poor "customer service" delivery. P14 explained the situation this way:

> I don't like the people. Like, no good customer service; no nothing there. The way is, like, not friendly. The only thing that's friendly, that my kids would go is because they have X-Box in the waiting room. That's the only thing. And a treasure box. Okay! What about the dentist? What about the assistant being nice? I don't care about no X-Box, no treasure box.

P19, on the other hand, expressed her frustration when trying to communicate her child's needs to her provider. She felt as if her opinion did not matter, which elicited her to seek another establishment. She described her unpleasant experience:

> I don't like the dentist where I visit. I'm trying to…to get him to clean all teeth of my daughter and he tells me: "No, just she needs fluoride and then when she's grown up we can do it." And I'm saying "No. I need you to do it now because I want her to have the perfect teeth when she's growing. But, huh huh. And I want to change.

P7, in this context, explained that the dental professionals were not capable enough to "handle" children. Their approach in dealing with her child's needs, in this case, was not reassuring. She even made a comparison between the dental professionals where she often visits to where she goes when specialized services are required:

> Like, in the way they approach the kids. I don't think they approach, they know how to approach kids. …In Lawrence, they specialize in kids. They know how to treat them; they know how to buy them.

Difficult Children Barrier

Having difficult children, who often resist dental services seemed to be a great concern for some parents. In this study, six parents conveyed their frustration in this regards, since their children are so scared. For P11, having her children's cooperation when they needed to attend dental services was impossible. She stated:

> Well…they just don't want to go. And then, when they're all ready and tell me where they're going; they just…they don't want to go, at all. They start to take everything off, and…it makes me…it makes them really impossible for me to take them.

For P7, her daughter is so aggravating that this situation often elicited specialized attention, which sometimes required her to go to a farther establishment. At times, her daughter is sedated in order for the provider to offer her the services she needed. This is not always pleasant or affordable for P7. She mentioned:

> But when I went last time, the doctor, he didn't want to even touch her. She's really difficult. With the dentist, yes. They usually send her to a place in Lawrence that they do, like, everything and they put her to sleep and all that stuff. She don't let them touch her.

For two of these parents, the issue is more the result of certain psychiatric conditions, such as autism and ADHD). In this case, the child may not "understand what is being done", as P12 explained or may not remain still as reported by P18:

> Because my son got…got ADHD. It's something that's very difficult when he's cleaning. So, sometimes he's a little bit hyper, you know. That, that's why I told my daughter, I want it quick over there…to check, you know.

Dental Coverage Barrier

Although this issue was not common for all the parents in the study, one of them recalled having difficulty in terms of which services can be covered through MassHealth and which are not. P20 recalled:

> But, I had difficulties finding the right dentist cause when I knew it was time for my children to getting their teeth cleaned…I needed the right dentist. And finding the right dentist was hard based on the fact that my insurance wouldn't cover certain things.

Oftentimes, the insured as to pay for the specific service themselves if it is obligatory. This was the case of another parent, P3, who actually paid $500.00 for her son's "surgery," she explained.

Health Reason Barrier

Indeed, parents find themselves in a unique position when they have to struggle to maintain their children's dental appointment because of their own or their spouses' health issues. P18 explained the reason why he was the one trying to keep up with his son's dental care:

> I don't work. I stay and I babysit…I'm their mother and father now, because my wife is in the hospital. But, it has been a long time. She got infection. One day, she was on the porch, cleaning. Because there's stairs and my wife is heavy…So, it's the stairs there, you know. She's you know, like, really heavy, and…she goes, like…It's a metal stairs over there, you know, like, the building. So, I think a piece of the metal, you know, brown one got in there. And she comes like, you know…I say: "What happened?" She says: "Cleaning like that, I hurt my ankle." She goes like that, you know…They give her, you know…Motrins. So, she goes, laying down there. The day after, that's very red, like that. She got in the ambulance, then she stayed there. That's the first time…So, she got infection…big infection. She got a surgery, so, she goes back home. […] And then, you know…two months after, she had to go back there. Because, she's kind of big; she's got out of surgery. So, now she's at a rehab.

Appointments Wait Period Barrier

Dental services often have extended appointment period, particularly in the case of routine dental cleaning. For this reason, two parents found it challenging not only in the case of routine cleaning but also when needed urgent care. They often have to wait

between three and six months for their next appointment. P8 voiced her frustration as follow:

> One thing I would say, because it's like a long period…six months…sometimes you forget. Yes. […] There are appointments that I missed. That's why. It's a long stretch, like six months. So, you forget about it. […] I would say that maybe you would schedule an appointment, I would say six months, and then something…it's a long stretch. Although, like, you had set, like, chosen a date. But that day comes; maybe your work schedule has changed and you are at work that moment. So, you would have to miss it. That's it. Medical appointment, no matter what's happening to you, you can right away get help with something. But, dentist today, there's nothing, like, they would say…And it's months. No matter what it is.

Language Barrier

Dealing with a diverse population requires dealing with individuals with different backgrounds and languages. Indeed, when delivering dental services one has to understand the language preferences of patients. In this instance, two parents explained the difficulties they have with only English-speaking providers. For P17, it was only a concern of having her own mother attending dental care services with her children, when her spouse or herself are not able to. This is because her mother does not speak English.

As for P6, the issue is more based on preferences since she is pleased with her current provider. She explained her dilemma in her child attending care in facilities where providers only speak English.

> Because the dentist I choose speaks Arabic and he lives maybe one hour away from my home. I need to take two buses, you know. […] So, sometimes I find it really difficult because the doctor is a very good doctor. Because most of them they don't speak Arabic and I find some difficulty to understand the doctor.

Maternity Reason Barrier

One parent described the problem she was having when needing to meet her son's dental appointment following her recent childbirth. P16 explained the reason why she had cancel some appointments:

> […] For example, I just had a baby…a month…a month-old, on the seventeen. I was not having the time…So, but, not for him. But, for the oldest, for my oldest son. I had to cancel the appointment because I was at the hospital and they gave me the appointment the same day. I was in the hospital. So, I couldn't make it, or bring him to the hospital for his dentist care.

Children's School Barrier

Having dental appointment schedule on a school day presented a problem for parents. Although they may try to avoid it, but sometimes it occurs. And for this one parent, P6, her child received some bad marks in school due to misunderstanding when she had to take him to his appointment. She expressed the miscommunication this way:

> Sometimes because, you know, the school. Sometimes we give a note to the school because the dentist. And the school, they didn't read his note. And when we see the paper, we see that he is…was…he doesn't go to school, he's dismissed or something like this.

Table 10

Parental Perceived Barriers to Dental Care Attendance

Key Themes	*Number of Responses*	*Selected Segment*
Work barrier	6	Yeah. I used to work, yeah. It was a problem with me, yeah. But, hum…Cause, you know, when you're working…I guess you can't get vaca…my son has an appointment; my daughter has an appointment, you know what I mean?
Transportation barrier	6	I think the transition. Sometimes, when I need…I don't have car. Maybe sometimes I feel it.
Location barrier	4	And the distance too because right now…Since I was born and little, I always got treated here. So, I used to live here in Riley, so my kids used to be here. So, I moved far away, so it's a long distance now.
Provider's approach barrier	4	It's just finding the right dentist, that's all. I had difficulties finding the right dentist… when I knew it was time for my children to getting their teeth cleaned.
Difficult children barrier	6	It's just when she's… When they start going in her teeth…that's when she has like…sometimes she'll cry or scream.
Dental coverage barrier	1	And finding the right dentist was hard based on the fact that my insurance wouldn't cover certain things.
Health reason barrier	1	I don't work. I stay and I babysit…I'm their mother and father now, because my wife is in the hospital. But, it has been a long time. She got infection. One day, she was on the porch, cleaning. […] So, I think a piece of the metal, you know, brown one got in there. And she comes like, you know…I say: "What happened?" She says: "Cleaning like that, I hurt my ankle." […]So, she got infection…big infection. She got a surgery, so, she goes back home. […] And then, you know…two months

		after, she had to go back there. Because, she's kind of big; she's got out of surgery. So, now she's at a rehab.
Appointments wait period barrier	2	To try to get an appointment in there is, like, hard. The wait is, like, three months.
Language barrier	2	I would say if I got into an accident or something and I can't bring them in or, you know, cause…even though if I'm not around, daddy is around. But, my mom lives with me but, she doesn't speak English. So, my big issue if something happens with mom and dad, then it would be…[…] the language barrier with my mom.
Maternity reason barrier	1	For example, I just had a baby…a month…a month-old, on the seventeen. […] I had to cancel the appointment because I was at the hospital and they gave me the appointment the same day. I was in the hospital. So, I couldn't make it, or bring him to the hospital for his dentist care.
Children's school barrier	1	Sometimes because, you know, the school. Sometimes we give a note to the school because the dentist. And the school, they didn't read his note. And when we see the paper, we see that he is…was…he doesn't go to school, he's dismissed or something like this.

Parental Greatest Barrier

When the parents were asked to share their greatest barrier, some of them mentioned some of the barriers that have already been discussed in the previous section (Table 11). Indeed, two parents strongly expressed the issue of "transportation" as their greatest barrier when trying to attend dental care services with their children. Also, two parents reported their frustration in terms of difficult, "aggravating children" and one parent focused on the fact that the "appointments wait period" is too long of a "stretch." Moreover, three parents emphasized their issues about their children "daily routine,"

which elicited parents to recognize that the barriers are not only in trying to access dental care services with them but also to manage their daily oral health practices. In line of this, P10 mentioned:

> I'm kind of glad you actually did grab me because that is one of the biggest difficulties, dental care, when it comes to the kids. It's not just going to the clinic, it's also doing it at home. So, it's…it's a struggle, like, how… how to get it done, when to get it done. It's the issue.

Aside from these aforementioned "greatest barriers, two other key themes also emerged during the interviews in this regards. They include:

Child's Health

In managing the oral health of their children, many reasons may arise, which may hinder their ability to properly do so. In some cases parental health may be a contributing factor. In other instances, when their children are the ones with a disease or condition that also impact their ability, it is also as important. In reference to his son's with the ADHD, P18 explained:

> Because… when it's time to go to school, you know, I don't want to start with him like that…then he starts…you know, he got problems, like that. I don't want to start an argument like that, you know, because…It's better he goes quiet in the bus, to not have no problem in the bus. That's why I let him. But, when he comes, I tell him; "Papi, you need to clean your teeth even whey you come from school."

I let him clean it. "No. Clean it, if you want to go in the bath." So, I let him do it. But, you know…

Life Inconveniences

Furthermore, other unanticipated or unforeseen reasons may also emerge, which may prevent parents from fulfilling their responsibility in terms of taking their children to their dental appointments. These reasons may include work schedule change, sudden health issues, accidents and more. And so, one parent conveyed her understanding that sometimes "life happens." Thus, P16 summarized her thoughts as follow:

Well, I don't really think there's a big problem for that but…well it depends because sometimes everybody have their stuff going on in their lives, so…

Table 11

Parental Greatest Barriers to Dental Care Attendance

Key Themes	*Number of Responses*	*Selected Segment*
Transportation	2	I think the transition. Sometimes, when I need…I don't have car. Maybe sometimes I feel it. When you want to take your son by bus, it's too far for me.
Aggravating children	2	Hmm…her crying…
Daily routine	3	With her? Ok. She doesn't like too much to brush her teeth. I have to be every time "Anna, come on, brush your teeth." Every time, every time, every time. So, that's my problem with her.
Children's health	1	Because… when it's time to go to school, you know, I don't want to start with him like that…then he starts…you know, he got problems, like that. I don't

		want to start an argument like that, you know, because…It's better he goes quiet in the bus, to not have no problem in the bus. That's why I let him. But, when he comes, I tell him; "Papi, you need to clean your teeth even whey you come from school." I let him clean it. "No. Clean it, if you want to go in the bath." So, I let him do it. But, you know…
Appointments wait period	1	It's all like the long stretch thing. Example, he has this thing that I thought, if it was medical, I could come in today, it's happening. I could come in the next day and see someone. But, dental, it's been a month now and I still…my appointment…the appointment they got for me was like two months. When someone is in pain, expect the person to be seen right away, and they are like, there's no appointment. But…
Life inconveniences	1	Well, I don't really think there's a big problem for that but…well it depends because sometimes everybody have their stuff going on in their lives, so…

Parents' Voice

In managing their children's oral health and seeking dental care with them, parents' experiences in this context varied (Table 12). Indeed, five parents reported having had "no problem with dental care". In this instance, P15 exclaimed:

> Actually, none. They actually explain them very good. I have no problems with them. If anything happens to my kids, I can just call. They'll make an appointment and then, let's go. I'll take them and.... But, everything is fine, otherwise.

In line with this idea, three parents mentioned that they were "pleased with their child's dental provider," in the sense of positive and remarkable services and the

provider's ability to make the children feel comfortable. P6 expressed her contentment this way:

> Everything, I think, is ok. Maybe my doctor is a very nice man. He likes children and my children like him and they are happy. They really have a nice experience.

Nevertheless some parents are not as satisfied with their experience. Indeed, some parents encountered several challenges that concerned them. They voiced their opinion on how some of the barriers could be reduced. For instance, P8 uttered her frustration in regards to excessive wait period when she needed to attend urgent care with her son for a toothache due to tooth decay. She explained that there needed to be "more dental urgent care places" available for such issues. She stated:

> Yes, it is a very big concern. I believe some dental issues can wait. But, a five-year old is in pain every, like, there and then he has to be on medicine before, like, on medication before the pain goes up. Some letter or in a 10 percent pain before he can get help unless like in months time. Then, it's a little…yeah…If there was to be like a place you could go to when it's an issue like that, something that really needs urgent care.

Similarly having "more specialized dental providers in closer areas" was another way that could help when dealing with aggravating children. P7 offered her suggestions as follow:

> Having dentists closer to this area, that they can see the kids that are difficult like her. Like, you don't need to go to Lawrence. It's almost an hour. Why not

> somebody from here, from Worcester? They specialize…in Lawrence, they specialize in kids. They know how to treat them; they know how to buy them.

Again, in relation to dental care services, one parent expressed her concerns when having to deal with providers that do not fully address the parent's concern about her child's oral care. And so, understanding the "provider's thoughts" is really a problem for P19, as she was trying to comprehend the reason for the calcium deposits on her daughter's teeth. She explained:

> I don't like that she has these…these deposits. He [the dentist] said "you have to wait; she's growing." And then…Yes, that's what he told me. He told me no, it's…when she was in the belly that's the problem. You don't have that…more calcium that she needs.

On the other hands, some other parents voiced their opinion in regards to the oral health practices. In terms of the "benefits of tooth brushing," P16 exclaimed her reasoning behind one having bad breath:

> Oh yeah…like, for that…you know sometimes the brushing teeth makes you get good breath. If you don't brush your teeth all the time, you have a bad breath.

She went further in accentuating that having bad breath could jeopardize a child's "social interactions." She mentioned:

> So, I don't want him to have bad breath while he'd be talking to people, "Oh God, your face!" For him to get…and he's in school too, so…All you have to do is brush your teeth and take him to the dentist.

Another parent expressed her understanding about "what to expect when a child starts teething." P1 explained that the providers should check the child's teeth during their first appointment and reassure the parent. She stated:

> She's getting her teeth, front ones coming in. Around that time when they start getting the teeth in. She's biting hard, drenching those sleeves. I think those are the first way to go. First appointment, to tell them to see if they are good. I mean there has not been any holes. Sometimes, I don't know if it's trying to grow in.

Table 12

Parent's Voice about their Children's Oral Health

Key Themes	*Number of Responses*	*Selected Segment*
No problem with dental care	5	Not really. I think I'm doing great. Because I did my job. I make sure they, even the boys, I make sure they brush. I bring them to the doctor all the time. If I have something before that, I bring them before the appointment or I call, something like that. I think it's really important. I don't have any concerns because that's something I really like to do.
Pleased with children's dental provider	3	Actually where I take them to the dentist, they're pretty good. Yeah, they're pretty good with kids. They'll play with them, like: "Hey I brought this today. Now see, you can't see this," you know. They'll be pretty scared.
More dental	1	I believe some dental issues can wait. But, a five-year old

urgent care places		is in pain every, like, there and then he has to be on medicine before, like, on medication before the pain goes up. Some letter or in a 10 percent pain before he can get help unless like in months time. Then, it's a little…yeah…If there was to be like a place you could go to when it's an issue like that, something that really needs urgent care.
More specialized providers in closer locations	1	Having dentists closer to this area, that they can see the kids that are difficult like her. Like, you don't need to go to Lawrence. It's almost an hour. Why not somebody from here, from Worcester? They specialize…in Lawrence, they specialize in kids. They know how to treat them; they know how to buy them.
Benefits of tooth brushing	1	Oh yeah…like, for that…you know sometimes the brushing teeth makes you get good breath. If you don't brush your teeth all the time, you have a bad breath.
About social interactions	1	So, I don't want him to have bad breath while he'd be talking to people, "Oh God, your face!" For him to get…and he's in school too, so…All you have to do is brush your teeth and take him to the dentist.
About provider's thoughts	1	I don't like that she has these…these deposits. He [the dentist] said "you have to wait; she's growing." And then…Yes, that's what he told me. He told me no, it's…when she was in the belly that's the problem. You don't have that…more calcium that she needs.
Teething: what to expect?	1	She's getting her teeth, front ones coming in. Around that time when they start getting the teeth in. She's biting hard, drenching those sleeves. I think those are the first way to go. First appointment to tell them to see if they are good. I mean there has not been any holes. Sometimes, I don't know if it's trying to grow in.

Summary

The experiences in managing their children oral health and accessing dental care with them was described by 20 parents in this study. In answering the first research

question, which involves how the parents explain their management of their children oral health, most of them indicated their children oral care practices, most being twice a day and the main method used was a toothbrush. Some of the parents reported some issues in the practices answers whether because of their children refusing or being unable to brush or floss or their lack of time to perform the routine. While some parents were involved in the practices, others were not as expert in their performance

In terms of dental care attendance, the information provided was also diverse. In regards to their children's first dental appointment, a few parents had never done so, while some took their children between the ages of one year and 5 years. Their last dental appointment was as less than one month ago to three years, from the time of the study. The frequency of the dental visits was between two months and seven months. In regards to parental reasons for dental visits, some parents described them to be more for preventive measures and cleaning, while another category of parents described the reasons as to address a problem or emergency, including cavity check or tooth extraction.

As for the children's knowledge and experience with the dentist, parents expressed the children knew how to floss and that they knew about cavities and tried to avoid eating candy. Their dental experience was either good or terrifying. Regarding the children's dental problems, some parents recalled no problems to some minor issues like calcium deposits to major ones including cavities and tooth decay. Indeed, some treatments were required, which included filling, root canal, and extraction. In order to adhere to their children's dental visits, all the parents reported having MassHealth, while

more than half explained their concerns if they did not have dental coverage, in the sense that they would not be able to attend dental care with their children.

In regards to parental views on oral health, the experiences were also diverse in the context of their knowledge about what's happening in children's mouth, when to see dentist, what is best for children from personal reading, food choices, the consequences of not going to dentist, and the benefits of going to dentist. Some of the parents were unaware of when to schedule the first appointment, their children's dental conditions, and the effects of formula on baby's teeth. Some parents had certain cultural and assimilated beliefs, and understood the cause of poor oral conditions, their parental responsibility and personal decision. Nevertheless, some were concerned in terms of financial hardship if they did not have dental coverage, of their children not performing their daily routine, their children's dental conditions, and the unavailability of specialized providers. Parents' attitudes towards their children's oral health ranged from being pleased to laid-back.

In line of the second research question involving the parents' perceived barriers in accessing oral health care services with their children, parents reported their perceived barriers in the form of work, transportation, facility location, provider's approach, their difficult children, dental coverage, and life other inconveniences. Parents had also the chance to voiced their opinion on the idea that they had no problem with children's dental care, were pleased with their children's dental providers, relayed the need for more dental urgent care facilities or more specialized providers in closer locations and other thoughts about the benefits of good oral health.

In the subsequent chapter, a discussion about the study findings is provided in relation to the theoretical framework, the Health Belief Model. The implications of the findings to public health and their positive social change impact are also interpreted. Finally, the study limitations are explained along with recommendations for future studies.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The findings of this qualitative phenomenological study brought about evidence that underserved parents of 5-10 year-old children face several challenges when seeking access to oral healthcare. In this chapter my interpretation of the data is discussed. In line with the theoretical framework, the HBM, this study allowed me to interpret how such parents manage their children's oral health and the barriers they experienced when trying to access dental care services for them. All the issues and barriers were explored in the context of parental experiences, as they related their challenges whether at home or in seeking dental care. In order to elicit an adequate depiction of their experiences, open-ended interviews were conducted using the guidelines established in both Chapters 3 and 4.

In this chapter, after providing a summary of the key findings, an interpretation is given in relation to the literature review in Chapter 2. This is to capture the essence of these experiences in the use of oral health care. A further discussion of the findings in the light the theoretical framework is done to help support the experiences in the perspective of a legitimate model, the HBM guiding this study.

A presentation of the study's limitations, recommendations, and implications are depicted before concluding the chapter with key viewpoints on the issue of oral health care access in the underserved population.

Summary of Key Findings

In this study, I recruited and interviewed 20 participants. In regards to the participants' profile, they were all mothers with the exception of one father, and between the ages of 18 years and 54 years old. They all resided in urban areas of Massachusetts, and most of them had at least one child, which was a requirement for the study. Their education level ranged from lower than 9th grade to college graduate. Four parents were unemployed but not seeking employment, six were unemployed but looking for work, five worked full-time, two worked part-time and three were students. Their yearly household incomes ranged from less than $15,000 to $49,999.

All participants' children were between 5 and 10 years old. All themes that emerged from the data were grouped into seven categories, in order to organize the most frequent and repetitive themes and simplify the participants' experiences.

Participants' descriptions of how they managed their children's daily dental care routine were grouped under oral care routine practices. Parents' descriptions of the dental issues that their children have, along with their children understanding of oral health were categorized under children's oral health problems and children's knowledge, respectively. Any themes related to dental visits, their frequencies, parents' reasons for taking their children to the dentist, and the children's dental problems were categorized as dental care attendance. Type of dental coverage was also a category. Parent's greatest barriers and their opinions about oral care were grouped under barriers to dental care attendance. Lastly, all themes relevant to the parents' beliefs, attitudes, knowledge, unawareness, concerns, and expectations were indicated under the category of parental

views. This structure allowed me to have a better understanding of the experiences expressed by the parents.

The data analysis revealed key themes to answer both research questions. For the first research question about parents' management of their children's oral health, the emerging themes pertained to the oral routine practices, dental care attendance, and parental views about oral health. In terms of the frequency of routine practices, half of the parents reported their children's performance as twice daily, while only a few stated that this was done three times a day. However, one parent explained the difficulties of having his child perform this task even once a day. Although all parents stated that tooth brushing occurred during their children's routine, none of them reported frequent use of other dental hygiene methods, such as dental floss or mouthwash. Even if some of the children used these methods once a day, they were not applicable at other times.

During these practices, parents reported that both they and their children had some difficulties with certain aspects of the practices. For the children, the issues were due to their refusal to brush or floss or because of their inability to brush or floss on their own. Parents expressed their frustration by stating that it was a constant battle or struggle with their children. As for the parents, the main issue pertained to their lack of time in maintaining their supervision, which was often due to school or work. Nonetheless, some of the parents explained their involvement in the daily routine, to ensure that it was properly done. Some reported brushing and flossing their children teeth and even having them use the mouthwash. Meanwhile, some parents reported their lack of expertise,

particularly in their ability to use a dental floss on their children's teeth, as they "did not know how far to go."

In terms of dental care attendance, all but one parent reported having taken their children for their first dental visit, which according to most parents started when their children were one year old. For some others, the first dental visit was between the ages of 2 and 5 years. Yet, the one parent that had not taken her child explained that her daughter was five years old but she refused to go every time she tried.

In terms of their children's last dental visit, the majority of the parents were proactive as they mentioned that their last visit was between a few weeks to 7 months before the time of the study. One parent delayed a dental visit for one year due to her relocation, while one parent, as aforementioned had not been in three years. For most parents, the frequency of their visits for scheduled routine cleaning was every 6 months. Yet, for a few parents, the visits were more frequent, between 2 and 3 months. This was mostly due to other treatments, such as fluoride, or other issues requiring follow-ups.

Parents' reasons for dental care attendance varied. These reasons were categorized as either for preventive measures or to address a problem or emergency. Most parents explained that their main reasons for using preventive measures such as good hygiene or for routine cleaning was to keep their children's teeth healthy, Their reasons for emergency visits included to extract loose teeth, to examine a decayed tooth, or simply to prevent further problems.

In terms of the children's knowledge of oral health and dental practices, one parent stated that her child had an interest in developing their ability to floss and was

cautious about consuming candy. Most parents stated that their children's experience with the dentist varied. For some, the children demonstrated ease, or comfort, while for others, the children displayed fear because of either the "doctor authority", the mask, the instruments, or the room in general. Because of their fear, the children would cry, scream, or fight.

Regarding the children's oral health problems, some of the parents denied any issues and more than half of the parents complained about their children having cavities. Only a few reported some loose teeth that took time to fall off, uneven distribution of the teeth, "soft teeth," tooth decay, or calcium residues on the teeth. For those with cavities, most of the parents did not report any treatment, while only two needed fillings, two others needed tooth extraction and one required a root canal. In order to afford these visits and treatments, all of the parents in the study reported having MassHealth and all conveyed their concerns about losing this coverage. Most of them explained that they would no longer attend dental care with their children since they would not be able to afford it.

Regarding parental views on oral health, parents in the study reported diverse attitudes, concerns, and suggestions. In terms of knowledge of their children's oral health and conditions, some of the parents explained their understanding of what was going on in their children's mouth, when to seek dental care services, and the best choices to make for their children. A few parents were unaware of some aspects of oral health care, including when to take their children for their first visit and some dental conditions.

Some of their personal beliefs also reflected their attitudes. These encompassed certain cultural restrictions, some assimilated beliefs, their personal responsibility toward their children, and their decision in seeking care for them. Parental concerns were focused on having their children's daily routine practices, their dental conditions, and the unavailability of specialized dental providers. One parent mentioned her expectations of having her children follow their daily routine.

The attitudes of the parents were also diverse. Some parents stated that they were pleased and satisfied about their children's oral health, or were motivated to taking their children to their appointments. Other parents were mostly observant and sometimes inquisitive about their children oral practices. A few other parents assumed the teacher role by showing their children how to perform the oral care routine. Some were adamant in keeping the children on track and tried to balance their activities to maintain the children's appointments; one parent was attempting to have their children visit the dentist and control their food choices. A few parents explained their exhaustion and struggle in managing their children oral health, while two parents displayed a more laid-back attitude in their supervision.

In answering the second research question about the barriers that the parents face in accessing dental care for their children, the emerging themes were categorized under parental perceived barriers, greatest parental barriers, and parents' voice in terms of their experiences, concerns and struggles with their children's oral health. Regarding the perceived barriers, more than half of the parents reported work and transportation as their key barrier to seeking care for their children. Some parents mentioned that the location of

the dental facility and the provider's approach were also a factor in their difficulty in attending dental care services. Some parents conveyed their frustration about having difficult children, which was also a contributing factor. Dental coverage, sickness, long appointment wait periods, language, particularly Arabic, maternity reason, especially after recent childbirth, and children's school, in terms of miscommunication between parents and school staff when the children needed to leave school to go to their dental appointments; all of these were also challenges in their oral care access. Besides some of these aforementioned factors being the greatest barriers, a few parents reported their children's health, in the sense of psychiatric conditions, and other life inconveniences, as their greatest difficulties in dental care attendance.

In terms of parents' voice about their experiences, concerns and struggles with their children's oral health, some parents mentioned that they had no problem with dental care and were pleased with their children's dental providers. Other parents were not as satisfied. They conveyed the need for more dental urgent care locations, more specialized dental care providers in closer areas, and better provider approach when dealing with their views about their children's needs. Other parents provided their opinion about the benefits of tooth brushing, particularly in their children's social interactions and what to expect when a child starts teething.

Interpretation of Findings

In terms of the study findings, I interpreted them based on four sections and in relevance to the two research questions. In the first three sections, I interpreted the first research question about parents' management of their children' oral health: 1) the

impactof poor oral health on the health and quality of life of the children, 2) the level of utilization of oral health services among the children, 3) some personal beliefs and practices impacting the oral seeking behavior among parents. The last section focused on the second research question about parental barriers to oral health care access: 4) certain predisposing factors influencing oral health access among the children.

Parents' management of their children's dental health has a great impact on the children's oral health. Among the chronic diseases related to poor oral health, dental caries is the most common and preventable (Chen, et al, 2014; Mathur & Gupta, 2011). According to Hamila (2013), Ashkanani & Al-Sane (2013) and Baginska, et al (2014), early childhood caries involves decay in one or more teeth or when the primary tooth surfaces are missing or filled.

In this study, most of the parents reported cavities, mostly in the primary dentition of their children. Some of these children had the teeth filled to avoid further problems. In correlation with Shelley, et al.'s (2011) finding that there is an association between poor oral health and teeth loss, two of the parents of this study explained that their children had to have a tooth extracted, as it had decayed. These young children were in a significant amount of pain and the level of dental caries required tooth extraction.

Sood, et al. (2014) discussed the relationship between nutrition and oral health, specifically examining the formation of oral biofilms and dental caries. With poor nutritional habits such as drinking and eating juice and cookies, as some parents mentioned, the immature enamel was more susceptible to the acid contained in these foods. The effect was the same in those who were bottle fed at night. One of the parents

indicated her lack of awareness of the effects of formula, which was jeopardizing her child's oral health.

Some of the parents were concerned about their children's social interactions in regard to bad breath. This was understandable since, in the case of bad breath, children might experience embarrassment, low social confidence, and discomfort (Kasmaei, et al, 2014). This elicited such parents to have their children adopt preventive measures, such as regular tooth-brushing and consistent dental check-ups.

If tooth decay is left untreated and if preventive measures are not followed, enamel defect, infection, and pain may be noticed in the children secondary dentition (Arrow, et al, 2013; Gibbs, et al, 2014; Hamdan, et al, 2013; Jürgensen & Petersen, 2013;Zhang, et al, 2014). The parents in the study tried to outline certain oral health practices and when to seek dental care services with the children. Certainly the levels of oral care utilization varied among them. With oral health practices, most parents explained that their children followed a frequent routine of tooth brushing and occasional use of dental floss and mouthwash. Yet, some parents found it difficult to have their children maintained their daily routine.

In terms of pursuing preventive care, Derisse, et al (2013) demonstrated that children practicing dental care at an early age were more likely to adopt such measures in the future. This was the reason provided by some of the parents that started with their children between the ages of one year and two years and attempted to keep consistent dental cleaning for them. On the contrary, some others who attended dental care in later years reported having to seek care for more invasive procedures, such as fillings and

tooth extraction. Also, as Noro, et al (2014) described, children with infrequent preventive services tend to develop high anxiety, making them less likely to seek further care. This was confirmed by a few parents, one of whom detailed the challenges she faced with her children, as they refused to attend dental care, and that it had been over three years since their first dental visit.

Regarding some personal beliefs and practices impacting the oral seeking behavior among parents, they involved the beliefs, knowledge, practices and attitudes of the parents. According to Nourijelyani, et al, (2014), values, beliefs, attitudes and behaviors relevant to oral health were usually established in early childhood and ascertained by the parents. And so, in this study, all the parents were taking part of their children's oral health. Yet, a few mentioned that their cultural beliefs played a role in the delayed pursue of dental care. Indeed, they judged it "too early" to seek care and that the primary dentition would "fall out." On the other hand, a few other parents agreed that, although they maintained some of their cultural beliefs, they had to assimilate to this new culture of the Western world. For, they felt they were responsible for their children's oral health outcomes and for ensuring adequate practices of good oral hygiene.

Per Isong, et al (2012), the degree of health literacy of a child's caregiver is substantially linked to the child's oral disease status. In this context, parent's knowledge in this study was indicative of the degree of their child's oral health maintenance. Some parents reported being aware of their child's oral conditions, the best food choices the needed to make and how to implement best routine practices. This established Chen's, et al (2014) view that mothers with higher knowledge of dental care were more likely to

seek preventive measures. However, a few parents were ignorant of some aspects of the daily routine practices, such as how to properly use a dental floss on a child, and also at what age they should start attending dental services with the children. This behavior was confirmed by the belief that the primary teeth were not as important, which demonstrated that parental poor health literacy was a great concern.

Chen, et al (2014) explained that dental caries in children was associated with parental lack of supervision. In this study, some parents conveyed their inability to supervise their children's oral habits because of lack of time because of work and other household priorities. And so, parents related their tendency in keeping less attention to their children's brushing habits and consumption of sugary foods.

As for parental attitudes, Rajabium, et al (2012) provided evidence suggesting that parental self-concept of oral health was indicative of their care seeking behavior with their children. Indeed some of the parents reported being adamant and motivated about their children's oral health and they would go to great extent in keeping them healthy. Some tried to balance their life in order to maintain their children's dental appointments. And so, the more positive the parents' attitudes the better the children's oral health. Nevertheless, for some other parents, maintaining their oral health was a struggled and often exhaustion prevailed. With the increase responsibilities of having to manage a larger household, as reported by some parents, they found it difficult to cope with the children's oral health necessities. In this context, family dynamics played an important role in the supervision and dental care attendance (Hamila, 2013; Mani, et al, 2010).

Indeed, those parents that expressed more laid-back or poor attitudes experienced more dental caries in their children.

Moreover, in this study, parental barriers to oral health care access with their children were also confirmed. Besides their knowledge and attitudes about oral health, the parents also conveyed additional barriers. Indeed, certain predisposing factors influenced their lack of dental services attendance. According to Freire, et al (2013), Nourijelyani, et al (2014), and Rajabium, et al, 2012, challenges in oral health are marked by the influence of socioeconomic status, including low family income, low education levels and occupation as well as families under social assistance. Most of the participants in the study were in this category and reported some negative experiences with caring for their children's oral health. This complied with the increase risk of the children not consistently practicing using other oral hygiene methods besides the toothbrush, which include dental floss and mouthwash.

Also, Ashkanani and Al-Sane (2013), Derisse, et al (2013), and Hamdan, et al (2013) indicated that inadequate practices were observed among minorities, where Blacks and Hispanics experienced the poorest access to oral health preventive measures, resulting in higher rates of dental caries. This was evident in the majority of the parents in this study, reporting at least one dental cavity in their children. Furthermore, according to Pourat and Finocchio (2010), Latino and African American children with Medicaid or CHIP coverage attended dental services less frequently. All the parents in the study mentioned that their children had MassHealth, the state of Massachusetts' Medicaid, coverage. Some of them expressed their difficulties in keeping appointments, reducing

their chances to better access to dental care. Also, under this coverage, some parents reported that certain services were not covered and that they had to access care only where providers accept this type of coverage.

Studies also disclosed that children from immigrant families had difficulties accessing oral services (Chen, et al, 2014). Although only a few parents in this study reported the language barrier, they showed preference toward dental providers competent in their native language. For them, not all providers in their areas had such competency and sometimes it was difficult to attend services where providers were also fluent in their native language.

Regarding other perceived barriers found in the study, some parents explained that lack of time due to their work schedule was their greatest barrier to accessing oral health care with their children. They were often unable to keep their appointments since they had to "run from one place to another," from work to school and to the dental facility. Furthermore, in light with environmental contributors, certain contextual factors, such as under-provided infrastructures and lack or unequal distribution of public services had a negative influence on the oral health of underserved children (Emami, et al, 2014). Indeed, some parents in this study reported having difficulties in terms of transportation, whether of not having a car or because they could not afford a taxi to reach the dental facility.

In the same instance, other parents complained of the uneven geographic distribution of dental providers. In other words, they conveyed their frustration about the location of the facilities based on the long distance they had to travel, particularly if their

children were in need of specialized treatment. For them, the availability of specialized dental providers was scarce in their areas. Also, another parental barrier was the lack of urgent dental care facilities to provide services in emergency situations. For a few parents, this was the reason for their children prolonged suffering since they had to wait for their actual appointment to be seen. Similarly, a few parents relayed their exasperation in terms of the long wait periods between appointments, which made it more likely for them to miss appointments and for their children to be delayed in urgent treatments. Per Derisse, et al (2013), there was a reduction in oral health care providers caring for the underserved children in minority populations, with low-income families and under Medicaid coverage. This was due to the fewer general dentists providing treatment to children in such program.

Also in the context of dental providers, parents were faced with the issue of lack of professionalism and insensitivity of dental professionals. Indeed they complained of the unkind approach of personnel, particularly towards their children. Parents expressed the need for providers, hygienists and other relevant personnel to become more sensitive to the needs of their children and for them to have better skills when dealing in inter-professional settings, especially those designed for children (Albino, Inglehart and Tedesco, 2012).

Other contributing barriers to parental dental attendance included the health conditions of parents or children and difficult children. In this study, sick parents were unable to care for their children's oral health or attend dental services with them. Sometimes, the children's oral hygiene was neglected. Similarly, parents of children with

psychiatric conditions, such as autism and ADHD found it sometimes difficult to manage their oral health. According to Blevins (2011), several medical conditions impact oral health making children more susceptible to poor oral health outcomes. Some of the developmental conditions include cerebral palsy, autism and other behavioral conditions (Ilda, et al, 2010).

For some parents in the study, certain life inconveniences impacted their access to dental care with their children. For one parent, being in the hospital post-partum made it difficult to keep her child's appointment and even when at home with the newborn, she reported lacking in the supervision of her oldest. For another, miscommunication with her child's school personnel jeopardized some of the child's dental appointments. Although, no specific studies were found to support the impact of other life inconveniences on parental dental care access with the children, this study made this a relevant matter.

Application of the Health Belief Model

The HBM is a psychological model with basis of predicting and explaining health behaviors (Glanz, et al, 2002). This model helped me understand the perceived barriers to oral health care access among underserved parents. I used it to effectively identify the barriers based on how they perceived them. And so, I applied the five specific constructs of the model as follow:

1. Perceived susceptibility: according to Rosenstock (1974), the probability of an individual to take action that would prevent or control a disease or condition is how they perceived themselves being susceptible to that disease or condition. Indeed, some of the parents in the study were concerned about their children

developing certain conditions, including dental caries and permanent tooth loss. Indeed, one parent conveyed her concern of her child having uneven teeth distribution in the future.

2. Perceived severity: health-related action is dependent on the individual believing that the health problem is a threat (Rosenstock, et al, 1988). And so, most of the parents understood the seriousness of dental caries and tooth loss. In fact, most of them reported cavities while a few of them had their children already undergone tooth extraction due to severe dental decay.
3. Perceived benefits: the ability for parents to recognize the need for the children to receive preventive dental measures was an important aspect in accessing care with them (Askelson, et al, 2013). In believing that if a recommendation is followed, the threat will be reduced, all parents were aware of the advantages of applying and accessing preventive oral care measure to mitigate disease risks in their children. Indeed, several of them expressed how important it was for them that their children attend their routine dental cleanings. For them, having their children with good oral hygiene and good oral health was the main reason for attending dental services. Yet, some others were struggling and only attended care when the children had a problem or emergency.
4. Perceived barriers: Kasmaei, et al (2014) also found out that perceived severity and perceived barriers were the main concepts for predicting tooth brushing in children. Most of the parents indicated certain barriers preventing them from accessing dental care services with them. Some of the main barriers included

work, transportation, location of dental facility, availability of dental providers, particularly specialized providers and those accepting their MassHealth coverage, dental professionals unkind approach when dealing with their children, difficult children refusing to attend dental services, long wait periods between appointments and their personal or their children's health conditions.

5. Self-efficacy: per Isong, et al (2012), parental beliefs and self-efficacy were indicative of the extent they would go to promote oral health behaviors in their children. Some of the parents denoted their confidence in their ability to achieve good hygiene with their children by being adamant, inquisitive and motivated in their supervision while some others were struggling in maintaining this standard.

Contribution to the Literature

This qualitative phenomenological study added some elements to the literature in terms of the barriers underserved parents faced when accessing oral health care with their children. The study highlighted the role parents played in the management of their children's oral health and the decision that might impact their oral health. Thus, the study supported the works of Isong, et al (2012) and Nourijelyani, et al, (2014) in demonstrating that parents and families were essential in their children oral health outcomes. The study also served as support to many researchers delineating the barriers to oral care access, including demographic barriers, work, transportation, availability and geographic distribution of dental providers. More importantly, the study extends these barriers to the type of approach conveyed by dental professionals when dealing with children, the prolonged wait periods for dental appointments and parents having

extremely difficult children refusing to attend dental care. Therefore, there is a need for more competent dental professionals and a better way to make appointments more manageable for parents. Also, there is a need for more specialized providers to address those aggravating children and ensured parents that their oral health could be improved.

Limitations of the Study

This phenomenological qualitative study helped me to provide information about the perceived barriers of self-reported underserved parents of 5-10 year-old children residing in the Massachusetts, whether in the management of their children's oral health or in their access to oral health care. Thus, the study was limited in the design, participants' selection, data collection and interpretation of the results. Since the study is explorative in nature, the findings cannot be generalized to the entire population. Instead, they may be used for future studies. The participants in the study were selected through purposive and convenience sampling in order to increase the possibility of transference. Although the population accessing the recruitment site was diverse, the participants had dental coverage for their children. Also, the facility offered dental services as well. This limited the study in the sense that the population had somewhat access to oral health care, reducing the chance of capturing participants that maybe were not seeking dental care.

Also, another limitation pertaining to participants' selection was regarding participants self-report of being underserved. Indeed, the interview instrument's demographic section was used as a screening tool to ensure eligibility. This questionnaire was also used for further selection as to determine the underserved population, based on low or moderate socioeconomic status, low education level, low income, unemployment

or unfavorable geographic residence, just to name a few. In this context, there was no specific measure to verify the accuracy of the provided information. The researcher had to only rely on the demographic answers to justify the underserved criteria.

In terms of the data collection, the parents' responses might have been subject to recall bias, as they might have inaccurately recalled certain events and their children past dental history. Moreover, since the interviews were conducted in a health care facility, participants might have answered based on what they felt was appropriate in such a setting, what would be more desirable for me, the researcher. In regards to the interpretation of the results, I might have been influenced by researcher bias. However, in order to mitigate the chance of researcher bias, I employed verification methods through member checking and agreement with the chairperson regarding the generated codes and themes.

Recommendations

The intent of this study was to determine the barriers that self-reported underserved parents face when accessing care with their 5-10 year-old children. Based on the study findings, children, whether from the general or underserved population, may benefit from parents' continuous supervision of their daily oral practices as well as access to dental services for routine maintenance, in order to promote good oral health. Hence, interventions programs targeting parents and caregivers of children from the underserved population should focus on promoting early access to dental services, the benefits of good oral health maintenance and the general health related consequences of poor oral health in children. Similar interventions should also outreach primary care and dental providers

into assisting such parents and make them understand the importance of oral health in children, as it is necessary for their general health.

Although the study is delimited to parents from a health care center in Massachusetts, its findings may be used to develop future quantitative research with a larger sample size in other groups of children, to ascertain how the findings can be generalized to the underserved population. Further qualitative studies could be performed to explore parental perceived barriers to oral health care access with their children at other institutions, including schools and churches, where researchers could assess a diversity of participants that might or might not have dental coverage. For, I assumed that lack of dental coverage might impact parents' attendance to dental care. Also, researchers may perform additional studies to demonstrate the effects of poor oral health during childhood on individual's general health in adulthood in the state of Massachusetts.

Social Change Implications of the Study

This study focused on eliciting a positive social change in improving the health and social conditions of the target population. Promoting better access to oral health care in the underserved children population requires constant interventions, particularly from parents and caregivers as well as primary care and dental providers. The barriers to oral health care perceived by such parents overshadow the their necessity for better management and dental care attendance. With the rise in dental caries among underserved children, it is necessary to understand the parental factors influencing their children's oral health. In other to address this issue, public health practitioners and health providers need to examine and understand these barriers and tailor interventions capable

of targeting this population. This requires ample collaboration and coordination. Thus, this study provided information on parents' perceived barriers, their knowledge, attitudes, beliefs and concerns in managing their children dental care and their impact on their oral health. Although parents seemed to be aware of the need to enforce regular oral hygiene in their children, providing education whether prior to childbirth or during a child lifetime, may assist parents in following appropriate measures. They may begin to understand when and why to seek early care with their children.

Also, disseminating the study findings at the community health center where the sample was drawn may help empower parents in improving their role of caregivers and advocates. Public health practitioners may use the study results to generate better health policies to ensure positive social change within the underserved community. They may be inspired to develop individual-based initiative aimed to increase access to preventive measures in the population. This study also denoted the need for more culturally and professionally competent dental providers in multiple areas. This may help practitioners in assessing a wider range of the targeted population and make parents more confident in their choices of dental providers. Lastly, having a wider range of providers accepting MassHealth coverage could reduce this barrier in the population. With an increase of knowledge of oral health access in the underserved population, children's quality of life and social interactions may be enhanced, hence delineating a positive social change.

Conclusion

In spite of the incessant public health interventions, oral health problems, namely dental caries, and poor access to oral health care in children remain an imposing concern.

Even though the literature provides general information about oral health care in children, the dental problems and several challenges faced by underserved parents throughout the nation, research is lacking in determining the barriers that Massachusetts' underserved parents encounter in accessing dental services with children under 10 years old. In this context, this study focused on exploring the experiences reported by self reported underserved parents residing in this New England state about their 5-10 year old children's oral health care. This was to determine the level of management and preventive oral care use in their children and the barriers that these parents perceived as challenges when trying to access dental services with them and supervise their oral hygiene. The high prevalence of dental caries in such children is the result of the difficulties parents encounter. Regardless of its limitations, this study brought about findings that could help elicit positive social change. In fact, the study findings indicated a number of these barriers and the concerns that these parents have. Thus, it is necessary that public health professionals continue to promote dental preventive measures in children and ensure that parents understand the importance of regulating and monitoring their children's oral health. This social change will be beneficial to society for, poor oral health is detrimental to individual's general health.

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Appendix A: Interview Instrument

Oral Health Care Access
Interview Guide

Experience

The following interview questions will help answer the first research question: How do parents of children ages 5-10 years who self-identify as underserved explain the management of their children's oral health?

1) What is your child daily routine for dental care?
2) Have you ever visited a dentist with your child?
3) When was the last time you visited the dentist with your child?
4) How often are these visits?
5) How many months would you say have passed since your child's last dental visit?
6) What are the reasons for taking your child to the dentist in the past?

Probe: Did you go with your child for regular check-ups or when he/she had a problem?

Probe: What is the reason for choosing regular check-ups?

Probe: What kind of dental problem did your child have?

Perception

The following interview questions will help answer the second research question: What are the perceived barriers for parents of underserved children ages 5-10 years in

accessing oral health care with their children?

6) Tell me about your child's experience with the dentist?

7) What do you think makes it difficult to seek dental care with your child?

8) Can you elaborate on these difficulties?

Probe: Can you afford dental care or do you have dental insurance for your child?

9) What do you think is the greatest difficulty to access dental care with your child?

10) What additional thoughts or concerns do you have regarding your child's oral health care?

Demographic Characteristics

1) Gender

a. Male b. Female

2) Age Group:

a. Less than 18 b. 18-24 c. 25-34 d. 35-44 e. 45-54 f. 55 or older

3) Marital Status:

a. Single never married b. Never married but living with partner

c. Married d. Divorced/Separated e. Widowed

4) Number of children _____

5) Age of each child _____

6) Number of children currently living in your household _____

7) Race/Ethnicity:

a. White/Caucasian/Non-Hispanic b. Black/African-American/Caribbean

d. Hispanic/Latino e. Asian/Pacific Islander f. Native American

g. Other h. Prefer not to say

8) Do you speak and understand English fluently? Yes _____ No _____

9) Current Education Level:

a. Less than 9th grade b. Some High School but no diploma

c. High School Graduate or GED d. Some College, no degree

e. Associate Degree f. Bachelor's Degree g. Master's Degree

h. Doctorate Degree i. Professional Degree j. Other

10) Employment Status:

a. Employed, Full Time b. Employed, Part Time c. Unemployed/

Looking for work d. Unemployed/Not looking for work e. Student

f. Retired g. Other (Please specify) _____

11) Yearly Household Income:

a. Less than $15,000 b. $15,000 – $24,999 c. $25,000 - $34,999

d. $35,000 - $49,999 e. $50,000 - $74,999 f. $75,000 - $99,999

g. $100,000 or more

12) Geographic Location:

a. Urban b. Suburban c. Rural

d. Zip code _____

13) Do you reside in any of the following facilities? Yes _____ No _____

a. Treatment facility b. Nursing home c. Assisted living facility

14) Are you mentally disabled? Yes _____ No _____

Appendix B: Research Proposal Questionnaire

RESEARCH PROPOSAL QUESTIONNAIRE
[redacted]

SUBMITTED TO PROGRAM & POLICIES COMMITTEE
Return to: Cindy Stockham at [redacted]

Research Proposal Questionnaires and all accompanying materials must be typed. Please submit your proposal one week prior to the scheduled Program & Policies Committee meeting.

Title of Proposed Project: Perceived Barriers to Oral Health Care Access for Massachusetts' Underserved Parents-

Principal Investigator(s) and affiliations:
Doudelyne Cenafils, PhD candidate in Public Health with specialization in Community Health and Education at Walden University

Practice Sites/health centers propose to Work with:
[redacted]

Practice/health center Site and/or Department-based Investigator(s) [other than PI] and roles, including FTE or calendar-month funding for project:
N/A

Other Collaborating Investigator(s) and affiliations:
N/A

Purpose of research: The intent of this proposed phenomenological qualitative study is to explore the phenomenon of oral health care access. The objectives, therefore, are

fourfold: a) to examine experiences reported by parents of underserved Massachusetts' children; b) to determine the level of preventive oral care among these children; c) to explore the barriers to oral health care access as perceived by such parents; and d) to determine the perceived factors for parents that prevent them from seeking oral health care for their children and even supervise their oral hygiene.

Hypothesis: Since this is a qualitative study, the research questions are as follow:

3) How do parents of children ages 5-10 years who self-identify as underserved explain the management of their children's oral health?
4) What are the perceived barriers for parents of underserved children ages 5-10 years in accessing oral health care with their children?

Methods: Before the study begins, the researcher will contact the health centers' administrative personnel to ensure that a private space is available to conduct the interviews. The private area will constitute of a room previously prepared for this task, upon any arrangement with the contacted personnel. For the study, a minimum of 10 to a maximum of 20 parents of underserved children will be recruited. The subjects will come from the two aforementioned health centers where half of the individuals will come from one practice site and the other half from the second site.

Since patients may experience significant health stress during that time and also since potential participants may need some time to think prior to making the decision to participate, certain measures will be taken to ensure proper recruitment. Therefore, a poster about the study will be displayed in the waiting area of the clinics. Then, individuals will be handed the research flyer as they come for routine check ups, particularly in the waiting areas of the clinics. The flyer contains a brief detail of the study as well as the researcher's contact information. The patients will be prompted to read the flyer and contact the researcher if they are interested. If they do, a brief explanation of the purpose of the study will be provided and they will be asked if they would like to participate.

Upon agreement, the researcher and participant will move to the private room, where an informed consent will be provided along with detailed information as to ensure that the subjects understand what they need to do and the time it would take to participate in the interview. Also, the researcher will give the Demographic Characteristics questionnaire to the participant and will ask them to fill it out, as to ensure eligibility to partake in the study. Each interview will be conducted by the researcher and will take approximately 45 minutes to an hour. The interview will be recorded by hand as well as audiotaped using a tape recorder, as per individual consent. Also, the interviewer will be courteous, respectful and will answer any questions that participant may have.

Funding Source:

N/A

Estimated Start Date: August 31, 2015 (depends on the final University IRB approval)

Estimated Date of Completion: February 26, 2015 (subject to change if total participants are reached before this date)

1.Who will benefit from the study? This study may benefit individual participant as it may provide them with an increased knowledge about oral health care. With such knowledge, individual quality of life could be ascertained, which may lead to better health and social interactions. This research may also provide fundamental insights to public health practitioners and providers on examining and possibly understanding the barriers and situations preventing access to oral health services in the underserved population, not only in the state of Massachusetts but also throughout the entire nation. Hence, better oral health policies could be generated as to ensue a positive social change in the state as well as in the nation. The description of parents' own experiences may empower public health professionals to generate individual-based initiatives aimed to increase preventive oral health among underserved populations.

2. How will study benefit current/future patients of the practice site(s) as well as the site itself?

__The study will benefit current and future patient of the practice by increasing their knowledge about oral health, including the risks associated with poor oral health care, especially in their children. With this knowledge they will learn to be more vigilant caring for their children's oral health. For, having a better general health during adulthood is also the result of a good oral health during childhood.

_____In terms of the practice site itself, the study will provide better understanding of the challenges faced by the underserved population when it comes to accessing oral health care. With the knowledge gained from this study, providers and staff will be able to better help patients, through health education and support.

3, What are the risks to patients? ____Being in this study does not pose any risk to the safety and wellbeing of patients. However, patients may find the nature of some questions sensitive._____

4. What provision will be made for dealing with the negative consequences of the study?

___In the case patients find some information sensitive and if for any reason some negative consequences were to surface, patient will be encourage to talk to the research advisor, Dr. Jeanette May, with whom they may discuss your feelings. Her contact number is xxxxxxxxx. Also, if patients want to talk privately about their rights as a participant, they can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with them. Her phone number is xxxxxxxxxxxx.

5. How will the study affect site(s) operations, particularly patient flow?

a) What will providers need to do? Providers may simply prompt potential participants about the study going on in the practice
b) What will nurses need to do? Nurses will not have to do anything.
c) What will Medical Assistants need to do? Medical Assistants will not have to do anything.
d) What will administrators/managers need to do? Administrators/managers need to inform personnel about the study provide a table in the waiting room to set up the study poster and flyers, as well as a private room for the interviews. Also, they will need to give the researcher a brief tour of the facility in order to show where the researcher will have access, so that the workflow is not disturbed. Administrators/managers may provide some supervision as needed.
e) What will scheduling personnel need to do? Scheduling personnel will not have to do anything.
f) What are the space needs of the project? A private room (or any area where privacy can be maintained) is needed to conduct the interviews. A section of the waiting room where a table can be placed to display the study equipment (poster and flyers).
g) What will medical records personnel need to do?
Nothing
h) Are there any other anticipated effects/demands on clinic operations and resources? There are no other anticipated effects on clinic operations and resources.
i) How will the study address any potential effects on patient flow and/or demands on staff time? Should there be any potential effects on patient flow, the researcher would take a break, allowing the flow to go back to normal. As for potential demands on staff time, the researcher would contact administrative personnel and inform them on the issue. Please note that the researcher will avoid disrupting the workflow at all cost.

6. Please outline the team's past experience working with the proposed site(s) and patient

populations, as well as any involvement of practice site staff, patients, and relevant

community-based organizations in developing this project: __The researcher has had no past experience working with the [redacted]. However, in 2008, the researcher was involved as a research associate in a study conducted by the Boston University School of Medicine. The study was to examine the acceptability of Human Papilloma virus (HPV) vaccination among African American and Haitian Immigrant women, and explore factors that influence parents' approval of the vaccine for their daughters. The study involved collecting data at both the Boston Medical Center and the Mattapan Community Health Center. This is also the reason why the Mattapan Community Health Center is a proposed site for the current study._

7. Is funding available for the practice site(s)/health center(s) to carry out the study? _____No funding is available to carry out this

study_____

8. Are funds available for practice site/health center support staff costs? __No, funding is not available to support staff cost

_____

9. What is consent process? Include detail on who will be expected to consent subjects and

when/where this is to happen. (Please attach consent form.) __The consent process is when subjects decide to participate in the study and a consent form is provided to them detailing all aspects of the study, the risks and benefits of the study, the voluntary participation of the subjects and privacy information. The consent form is to be given to the participant in the private room where the interview will be conducted. The researcher

will go over the consent form with the participant before beginning the interview and will ensure that the participant understands the provided information and signs it.

10. Will participating patients receive any compensation for their participation? Participants will receive a $10.00 gift card for their participation, even if they decide to withdraw from the study.

11. How will confidentiality be maintained? Any information provided by patients will be kept confidential and anonymous and will only be used for the study purposes. The researcher will not use their personal information for any purposes outside of this research project. Also, the researcher will not include their name or anything else that could identify them in the study reports, to protect their rights to privacy. Participants will be allowed to choose a name other that their own to represent them throughout this process. There will not be any identifying characteristics about them or about the people they may refer to during the interview session.

Also, no one will have access to any of their information, except for the research advisors, Dr. Jeanette May and Dr. Vasilieios Margaritis. All files will be kept secure by using password-protected databases and hard copies will be stored in a locked file box. Data will be kept for a period of 5 years, as required by the university, and will be deleted after that time.

NOTE: Access related to PHI (protected health information) must be approved by the relevant HIPAA Privacy Officer(s). For some sites, this will be the UMass HIPAA Privacy Officer; other sites have their own HIPAA Privacy Officers. The researcher may have to provide supporting documentation on which the covered entity may rely in meeting the requirements, conditions, and limitations of the HIPAA Privacy Rule.

12. Has there been any previous external Human Subjects Committee review of this proposal?

___The research proposal has already been approved by the dissertation Chair and Committee Member. The IRB application will be sent to the University as soon as the practice sites approve this study. Please note that finding the practice sites is the basis of the IRB approval for Walden University. Hence, the actual sites should be included in the application before IRB review, which should take between 4-6 weeks.

13. What were the results? ____Results are pending since the application has not yet been submitted to the University board.

14. Will publishable results include staff from the practice site/clinic as author or involve acknowledgements? ___Publishable results will not involve acknowledgments of staff from the practice site, per University recommendations.

15. How will the research be used? ___Upon completion and final approval of the research, it will be published. The results will also be disseminated to the Program and Policies Committee of the practice site, which may be used to provide better insights on the issue of interest. As aforementioned, public health practitioners and providers may gain substantial understanding on the situations preventing access to oral health care for the underserved population. This research may also be the basis for future research. __

16. Please attach abstract of proposal and any other materials that will help us evaluate the request for participation in or endorsement of your project.

Study abstract, interview instrument, informed consent form, poster, study flyer , letter of cooperation and the completed University IRB application are attached with this application).

[redacted] REQUIRED ATTACHMENT

Program and Policies Committee Review

Any changes to the proposal **must** be submitted to the Program & Policies Committee for approval.

Upon project completion, please submit a brief summary of the results to the Program & Policies Committee.

Reviewed by Senior Management Team		**Date** _____
Recommended ☐	**Not Recommended** ☐	
Reviewed by HIPAA Privacy Officer		**Date** _____
Recommended ☐	**Not Recommended** ☐	
Reviewed by Program & Policies Committee		**Date** _____
Recommended ☐	**Not Recommended** ☐	
Board of Directors		
Approved ☐	**Not Approved** ☐	**Date** _____

Appendix C: Research Site Approval Letter

January 4, 2016

Dear Doudelyne Cenafils-Brutus,

Based upon our review of your research proposal, the Quality of Care Committee gives permission for you to conduct the study entitled "Perceived Barriers to Oral Health Care Access for Massachusetts' Underserved Parents" within the [redacted]. As part of this study, we authorize you to collect all relevant qualitative data, including recruiting candidates in our waiting room or lobby, interviewing a maximum number of 20 participants and submitting the study results to the Quality of Care Committee through a PowerPoint presentation. You agree that prior to publishing the study results you will allow the [redacted] the opportunity to review and have final approval. Individuals' participation will be voluntary and at their own discretion.

We understand that our organization's responsibilities include: Access to the facility during working hours, tour of the practice site to show where the researcher will have access, a table, if possible, setting in the waiting room, a private room and Administrators/Managers supervision as needed. We reserve the right to withdraw from the study at any time if our circumstances change.

The student will be responsible for complying with our site's research policies and requirements.

I confirm that I am authorized to approve research in this setting and that this plan complies with the organization's policies.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University IRB.

Sincerely,

Susan Melucci

Director of QI

xxxxxxxx