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Successful Strategies for Increased Dental Practice Competitiveness

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Walden University

College of Management and Technology

This is to certify that the doctoral study by

William B. Eyster

has been found to be complete and satisfactory in all respects,
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the review committee have been made.

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Walden University
2019

Abstract

Successful Strategies for Increased Dental Practice Competitiveness

by

William B. Eyster

MBA, Embry-Riddle Aeronautical University

BS, Embry-Riddle Aeronautical University

Doctor of Business Administration – Technology Entrepreneurship

Submitted in Partial Fulfillment of the Requirements for the Degree of

Doctor of Business Administration

Walden University

December 2019

Abstract

The rapid expansion of dental service organizations (DSOs) continues to disrupt the traditional dental practice model and there was a 12.2% increase in DSOs between 2015 and 2016. Some solo and small group dental practice owners lack strategies to adapt their businesses to be successful in newly competitive markets including DSOs. Grounded in systems theory, the purpose of this qualitative multicase study was to explore strategies dental practice owners use to adapt their businesses to be successful in newly competitive markets. The participants included 3 solo and 2 small group dental practice owners in central Kentucky who demonstrated success in developing and leveraging strategies to be successful in newly competitive markets. Data were collected through semistructured interviews and company documents. A thematic analysis was used to analyze the data. The 3 major themes identified were patient care and experience, patient and community relationships, and adaptation and innovation. The application of effective strategies identified in this study may have implications for positive social change by enabling dental practitioners to continue to provide access to outstanding dental care in the communities they serve. A second implication for positive social change is the potential economic benefits to the community through employing dentists and clinical staff, providing commerce to suppliers and business service providers, and tax contributions to the city, state, and U.S. federal government.

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Dedication

My life as well as this doctoral study is dedicated to the Lord who gave me the strength to complete the job. I also dedicate this accomplishment to my amazing wife, Tracey; my daughter Samara and her husband Benjamin; and my son Westley, his wife Julia, and the blessing of our first grandchild due in March. I am grateful for your support, encouragement, and grace during this process. I am blessed with wonderful parents, family, and friends. Finally, I dedicate my academic life to Dr. Alvin L. Morris, who is the source of my desire to excel in a life of continuous learning.

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Section 1: Foundation of the Study

Significant competitive pressures are disrupting the traditional practice model for solo and small group dental practice owners. The purpose of this study was to explore the strategies some solo and small group dental practice owners use in a new competitive market including dental service organizations (DSOs). Dentists who are successful in this dynamic environment provided insights and strategies through this qualitative case study. Application of these strategies by other dental practitioners could lead to increased performance and practice sustainability.

Background of the Problem

Factors influencing how dentistry will be practiced continue to impact the dental industry. Kao (2014) shared said predominant among these factors are the emergence and growth of highly efficient competition from dental service organizations (DSOs). DSOs are growing rapidly, and in 2015, they represented more than 15% of all dentistry practiced in the United States (Cole, Dodge, Findley, & Young, 2015). The DSO model provides highly efficient and effective managed services to be competitive and gain market share in the areas where they operate.

Dental education cost growth has resulted in significant educational debt for dental student graduates. Dental students with debt averaged over $262,000 in 2016 (Wanchek, Cook, Anderson, & Valachovic, 2016). Personal debt burden along with tightening lending practices from financial institutions are deterrents to the traditional doctor ownership model where newly graduated dentists buy into or acquire a dental practice (Wanchek et al., 2016). In an environment where recent dental school graduates

lack the financial ability to buy into or acquire a dental practice, the DSO model has emerged as a viable buyer of available dental practices and employment alternative for graduating dental students.

Business owners face many challenges requiring effective deployment of strategies in response to disruptive and rapidly changing climates. The growing DSO model continues to disrupt the traditional doctor owner and solo practitioner model of dentistry (Kao, 2014). Rapidly-growing, cost-efficient, and competitive DSOs along with a reduced number of viable practice buyers continue to create significant strategic challenges for the traditional solo-practitioner doctor owner (Cole et al., 2015). There is a need for these doctor owners to identify and deploy effective strategies to adapt their businesses to be successful in this new environment.

Problem Statement

The rapid expansion of DSOs continues to disrupt the traditional dental practice model (Kao, 2014). The American Dental Association (ADA, 2017a) reported from 2015 to 2016, the number of dentists affiliated with a DSO grew by 12.2%. Cole et al. (2015) predicted managed group dental practice will be the predominant oral healthcare setting within the next 7 years. The general business problem was some dental practice owners lack strategies to adapt their businesses to be successful in newly competitive markets. The specific business problem was some solo and small group dental practice owners lack strategies to adapt their businesses to be successful in newly competitive markets including DSOs.

Purpose Statement

The purpose of this qualitative multiple case study was to explore the strategies some solo and small group dental practice owners use in a new competitive market including DSOs. The targeted population consisted of solo and small group dental practice owners in central Kentucky who demonstrated success in developing and leveraging strategies designed to compete with DSOs. Positive social change will result from successful dental practices who may contribute to the local economy by providing ongoing jobs for members of the community, including dentists. An additional possible implication for positive social change is ready and reliable access to dental services for people who reside in central Kentucky communities.

Nature of the Study

Researchers can use quantitative, qualitative, and mixed methods methodology for research (Merriam & Tisdell, 2016; Saunders, Lewis, & Thornhill, 2015). I selected the qualitative method for this research. Researchers use the qualitative method to understand the perceptions and attitudes of research participants and explore their experiences (Merriam & Tisdell, 2016). The qualitative method was deployed to identify strategies used by solo and small group dental practice owners to be successful in a new competitive market including DSOs. The study included an in-depth description of the phenomenon according to direct fieldwork observations, documents, and open-ended semistructured interviews.

Researchers use the quantitative method to identify specific numerical relationships or differences among variables (Yin, 2018). I did not choose the quantitative

methodology, as the nature of my research in this study was to explore successful strategies used by solo and small group dental practice owners in a new competitive market including DSOs. Researchers using mixed methods include attributes of both quantitative and qualitative methods (Saunders et al., 2015). Selection did not include mixed methods in this study.

The qualitative method includes several designs. The most common qualitative designs are narrative, phenomenology, ethnography, and case study (Hyett, Kenny, & Dickson-Swift, 2014). I used the case study design in this doctoral study. Yin (2018) explained that a descriptive case study provides a full description of a phenomenon in research. Furthermore, researchers who use a case study design collect, analyze, and report study findings as a result of an in-depth understanding of a bounded system (Akers & Amos, 2017). Researchers use the narrative study design to explore the lives of individuals and report on their experiences through participants' personal stories (Hyett et al., 2014). The purpose of this study was not to explore dentists and their individual life experiences. The purpose of this study is to explore the effective strategies used by successful solo and small group dental practice owners in a new competitive market including DSOs. Selection did not involve a phenomenological design, as the intention was not to explore meanings of participants' lived experiences in this study. Finally, researchers use the ethnographic design to describe and interpret a culture-sharing group (Goulden et al., 2017). My research did not focus on describing or interpreting dental group cultures.

Research Question

What strategies do successful solo and small group dental practice owners use to adapt their business to be successful in a new competitive market including DSOs?

Interview Questions

1. What strategies have you used to improve your competitiveness in your market?
2. How have you assessed the effectiveness of your strategies?
3. What were the key barriers to implementing successful strategies you have used to increase competitiveness in your market?
4. How did you address key barriers to implementing strategies for improved competitiveness in the marketplace?
5. What additional information would you like to add?

Conceptual Framework

I used the general systems theory (GST) conceptual framework for this study. Ludwig von Bertalanffy developed GST in the 1930s and 1940s. von Bertalanffy (1972) viewed the world and business systems as a whole when attempting to solve complex problems because systems have interactions, interdependencies, and synergies with the individual parts of the system. Systems theory can provide a foundational construct to explain a phenomenon and trends in a real world system (Whitney, Bradley, Baugh, & Chesterman, 2015). GST involves how organizations change and adapt in response to stimuli from their external environments (von Bertalanffy, 1972).

GST is a method for business leaders to understand and address complicated business problems. Systems and complexity science theories are used by researchers and academics to evaluate general and family medical practice issues (Sturmberg, Martin, & Katerndahl, 2014). Sturmberg et al. (2014) explained systems theory allows individual medical practitioners to uniquely adapt to local competitive and environmental conditions. Scholar groups have applied systems thinking as a set of concepts that can help solve real-world issues (Mingers, 2015; Rajagopalan & Midgley, 2015). GST is a framework for the study of the traditional dental practitioner model and industry dynamics caused by the expansion of DSOs. von Bertalanffy's GST provided the lens to identify effective strategies used by solo and small group dental practitioners designed to compete in a changing environment in central Kentucky. The GST also provided me with a means to analyze the relevance of the study to address the research question.

Operational Terms

Caries: Caries is a term for tooth decay (Young et al., 2015).

Dental public health: The dental public health specialty promotes dental health through organized community efforts. This involves dental health education of the public through research and administration of group dental care programs (ADA, 2015).

Oral and Maxillofacial Pathology: Oral and maxillofacial pathology is a dental specialty dealing with diseases affecting the oral and maxiofacial regions. The oral and maxillofacial pathology specialty focuses on the discipline of pathology associated with the nature, identification, and management of oral disease (ADA, 2015).

Prosthodontics: The prosthodontics specialty provides diagnosis, treatment planning, rehabilitation, and maintenance of oral functionality for patients with missing or deficient teeth or oral and maxillofacial tissue loss (ADA, 2015).

Assumptions, Limitations and Delimitations

Assumptions

Assumptions in research are factors, conditions, ideas, or notions believed or assumed true by researchers (Ford et al., 2015). Marshall and Rossman (2016) explained that assumptions are unverified facts that are considered correct. There are at least six assumptions in this study. The first assumption was that a qualitative methodology was a suitable research method for this study to explore lived experiences of solo and small group dental practitioners. The second assumption was that a descriptive case study design would help to provide a full understanding of the phenomenon facing dental practitioners. The third assumption is that the GST would provide a lens to understand the complicated business challenges facing solo and small group dental practitioners and the strategies used to compete in a changing environment in central Kentucky. The fourth assumption was study participants were willing to participate by honestly and truthfully answering the interview questions. The final assumption was that the conclusions of this study would potentially help solo and small group dental practitioners develop and leverage strategies to be successful in a competitive market including DSOs.

Limitations

Limitations result in situations where research results are restricted by potential weaknesses of the study (Marshall & Rossman, 2016). A limitation of this qualitative

study was the participant sample size. A second limitation of this study was participants' lack of comprehensive knowledge regarding dental industry dynamics and the competitive pressures facing solo and small group dental practitioners in central Kentucky. A third limitation in this study was willingness of participants to fully disclose specific strategies they deemed to be competitive advantages in the marketplace. To alleviate concerns, I reassured participants regarding the confidentiality of their participation in this study. A final limitation was the potential of personal bias. As a researcher who participates in the dental industry, personal bias could influence interpretation of the findings.

Delimitations

Delimitations are imposed boundaries set by the researcher to focus the scope of the study (Knafl, Leeman, Havill, Crandell, & Sandelowski, 2015). A delimitation of this study was the geographic area restricted to central Kentucky. A second delimitation was that study participants were restricted to solo or small group dentists actively practicing dentistry. Guay, Wall, Petersen, and Lazar (2012) determined that a key weakness of the dental industry is a lack of business acumen on the part of dental practitioners who are technically trained and equipped to treat patients, but lack business acumen and skill sets necessary to effectively lead a small business enterprise.

Significance of the Study

Solo and small group dental practice owners are an important and integral part of the overall healthcare system serving the people of central Kentucky. The dental practices and oral healthcare needs of the community provide stable employment for the

employees who live in this area. Business owners can achieve success by developing and implementing business strategies (Siggelkow, 2011). Strategies identified in this study could help solo and small group dental practice owners be successful in a newly competitive market including DSOs.

Contributions to Business Practice

The dynamics in the dental industry place solo and small group dental practitioners' continued success and sustainability at risk. Solo or small group dental practitioners need to effectively and efficiently operate and lead a dental practice (Taichman, Taichman, Inglehart & Habil, 2014). The skills necessary to operate and lead a dental practice are largely not addressed as part of the dental educational process (Manakil, Rihani, & George, 2015). The solo or small group dental practitioner is typically left to develop business skills over time (Taichman et al., 2014). This study included identification of strategies that when applied may help solo and small group dental practice owners be successful in a changing and increasingly competitive market including DSOs. Application of these strategies by solo or small group dental practitioners may have implications on increased practice efficiency and effectiveness, reduced costs, improved techniques, and other important areas of practice. Improvements in these operational areas may lead to increased competitiveness, profitability, and overall sustainability for dental practitioners.

Implications for Social Change

Solo and small group dental practice owners provide unique and needed dental services. Dye (2017) reported oral health disorders and the associated socioeconomic

impact on the population makes dental care an important global public health issue. Not having access to dental services could lead to communities not having adequate access to dental care and resulting in reduced oral health of individual members in the community. Applying effective strategies identified in this study may enable solo and small group dental practice owner to provide sustainable dental services to the community.

A second potential benefit of social change involves economic benefits to the community. As small businesses in the community, solo and small group dental practitioners provide employment for dentists and clinical staff, dental care services to the community, and tax contributions to the city, state, and U.S. federal government. Successful and sustainable dental practices increase prosperity for local families by providing employment for the business owner and the staff, goods and services to the local community and tax revenues to the government.

A Review of the Professional and Academic Literature

This qualitative case study focused on solo and small group dental practice owner perceptions, attitudes, and experiences regarding strategies used by practice owners to be successful and compete in a market including DSOs. The problem statement, purpose statement, research question, and conceptual framework formed the foundation for this review of professional and academic literature. As the researcher, I used the literature review to gain context and background information regarding the dental industry and specific dynamics faced by solo and small group dental practitioners. Conducting a literature review also provided foundational knowledge regarding dental industry trends, vicissitudes, and dynamics.

Literature collected as part of this review included current and historical peer-reviewed articles as well as other scholarly journal articles, seminal books, and government documents that provide information relating to the dental industry, changes affecting solo and small group practice owners, and the emergence and growth of DSOs. This literature review included journal articles, published research, dissertations, and web site articles identified through online databases available from the Walden University Library. Databases were ABI/INFORMS Complete, Business and Source Complete/Premier, EBSCO eBooks, ProQuest Dissertations and Theses, ProQuest Health, Medical Complete, and Google Scholar. I also used data from the U.S. Census Bureau. The primary keyword and search terms used were: *dental industry*, *dental service organization*, *DSO*, *dentistry*, *dental dynamics*, *solo and small group practitioner*, *dental market*, and *dentist*. The literature review includes 89 references of which 88% were peer-reviewed and a strong majority published in the last 5 years.

The literature review begins with a discussion of the GST, the application of the GST to the purpose and business problems addressed in this study, and a discussion of alternatives to the GST. The literature review also includes an overview of the dental industry, its business model, and how it is organized. I provided an analysis of dental industry dynamics broken into four categories: (a) economics, (b) practice models, (c) demographics, and (d) leadership education. Following is a review of DSO background, growth dynamics, and distinctives. The literature review concludes with a summary of key concepts and findings.

Conceptual Framework: GST

The purpose of this qualitative multiple case study was to explore the strategies some solo and small group dental practice owners use in a new competitive market including DSOs. In this study, the goal was to answer the central research question regarding what strategies successful solo and small group dental practice owners use to adapt their business to be successful in a new competitive market including DSOs. The target population was solo and small group dental practice owners in central Kentucky who had demonstrated success in developing and leveraging strategies designed to compete with DSOs. This target population had valuable information and insights pertinent to the purpose of this study. Semistructured interviews with solo and small group dental practice owners who participate in this study provided valuable insights into strategies successful practitioners use in a competitive market including DSOs.

The GST is a prominent theory used in research involving unpredictable and dynamic business management environments. The concept of systems theory was developed by von Bertalanffy in the 1930s. von Bertalanffy (1972) viewed systems holistically with interactions, interdependencies, and synergies with the individual parts of the system when attempting to solve complex problems. Suter et al. (2013) explained systems theory as a concept where individual parts of a system are integrated to form the whole system. Suter et al. said that essential characteristics of the GST are: (a) systems have individual components, (b) components in a system have interdependencies, (c) the system is holistic, (d) the system is goal seeking, and (e) the system produces feedback. Almaney (1974) determined that the systems concept applies to most phenomena,

whether physical, social, or biological, as all systems consist of a number of components put together to form a unique object or feature. The overall system is not distinguished by the characteristics of the constituent components, but rather the results of interactions and interdependence among parts (Almaney, 1974). Strategies deployed by solo and small group dental practitioners can be components of a system that leads to achieving success in a dynamic and competitive market including DSOs.

In addition to internal functioning of various system components, the system is also subject to influence from external forces such as increased competition and regulations, along with changing economics and consumer behaviors. Almaney (1974) explained that dynamic changes introduced by external forces could disrupt the function of the system. In response to these externally-driven disruptions, the system should include a means to adapt through strategic plans and strategies focused on external dynamics influencing the system (Almaney, 1974). In this literature review, I explored externally-driven dynamics and potential disruptions the dental industry continues to experience.

While initially proposed to combine the disciplines of biology and physics, the GST can be used in the study and analysis of business systems. von Bertalanffy (1972) said modern biology asserts the necessity of studying both the individual parts of an organism in isolation but also in relation and interaction with the whole organism. von Bertalanffy went on to posit that businesses function as integrated sets of subsystems with each unit, department, or function working together to accomplish the goals of the organization. The GST requires consideration of the function of the individual parts of a

system while considering how these separate parts function in relation to the entire system (von Bertalanffy, 1972). GST regards the interrelationships and interactions between the unique components or sub-elements of a system (Salmona, Kaczynsk, & Smith, 2015).Almaney (1974) described a system as a number of elements interrelated in such a way where the elements form a single unit or complex organization. The GST focuses on the whole system while recognizing that the function of each component of a system may shape the characteristic behavior of the system (Adams et al., 2014). The GST allowed me as the researcher to explore the various elements of a dental practice and strategies deployed by solo or small group practitioners.

Contrasting Frameworks

A close alternative to GST is the complex adaptive systems (CAS) theory. The CAS theory is rooted in von Bertalanffy's systems theory and incorporates an organizational cycle of learning and redesign (Dann & Barclay, 2006). Persaud (2014) said that healthcare organizations are CAS. Basole, Bodner, and Rouse (2013) identified the need for healthcare organizations to develop innovations as a CAS. In contrast, the CAS theory evaluates adaption and innovation in the system. The GST focuses on the whole system along with the individual components of the system, allowing me as the researcher to focus on identifying strategies used by solo and small group practice dental practitioners to remain competitive in a changing dental industry.

Two additional alternatives to the GST are the observe, orient, decide, and act (OODA) and the plan, do, study, and act (PDSA) quality improvement models. The OODA model applies in many operational areas including logistics, supply chain, human

relations, and customer relationship management (Vagle, 2016). Miller and Clark (2016) emphasized the importance of feedback and repetitive looping in the application of the OODA model. OODA modeling provides relationships between control structures such as assessment, decision-making, and knowledge similar to the relational approach used in the GST (Miller & Clark, 2016). By contrast, the OODA stresses applied decision-making while the GST has an emphasizes links between relationships and structures (Caws, 2015).

The PDSA quality improvement model is a widely-used method for organizational change management. As an alternative to the GST, the PDSA quality improvement model is used to systematically review and improve independent components, processes, or tasks within a system (Donnelly & Kirk, 2015). Healthcare models focused on patient care use the PDSA as a method of quality improvement (Wolf, Doane & Thompson, 2015). Organizations use the OODA and PDSA as effective tools to implement improvements and positive changes within organizations. For the purposes of this study, the GST more closely aligns with the need for dental practitioners to evaluate change and adapt strategies in response to external stimuli.

Application of GST

Individual medical practices use systems thinking to adapt to unique local competitive and environmental conditions. GST outlines how organizations change and adapt in response to stimuli from their external environments (von Bertalanffy, 1972). Sturmberg, Martin and Katerndabl (2014) identified an increase in researchers and academics that applied systems and complexity science theories to general and family

medical practice issues just after the start of the twenty-first century. A number of subcomponents comprise a dental practice including, clinical dental care, human resources, customer and patient service, marketing, finance and administration, operations, insurance claim management, supplies management and collections all functioning as a business system to ensure success and sustainability (Levin, 2014). GST met the needs for this study as complicated industry dynamics, caused by the rapid expansion of DSOs, continue to disrupt and negatively affect the traditional dental practice model.

Dental Industry: Overview

Dentistry is a part of the overall medical health industry with a history dating back as early as 7,000 B.C. Dentistry involves the study, diagnosis, prevention, and treatment of conditions, disorders, and diseases of the dentition oral mucosa and related adjacent maxillofacial structures (American Dental Education Association [ADEA], 2018). The first dental college in the United States was the Baltimore College of Dentistry, which opened in 1840. The ADA is the governing body of the dental profession. The ADA (2015) designated 10 dental practice types: (a) General Dentist, (b) Dental Public Health, (c) Orthodontics and Dentofacial Orthopedics, (d) Oral and Maxillofacial Pathology, (e) Oral and Maxillofacial Radiology, (f) Oral and Maxillofacial Surgery, (g) Pediatrics, (h) Endodontics, (i) Periodontics, and (j) Prosthodontics.

The general dentist is a primary care provider responsible for the overall coordination of oral care for patients of all ages (ADA, 2015). The National Commission

on Recognition of Dental Specialties and Certifying Boards provide the following descriptions for nine dental specialties:

- *Dental Public Health:* The dental public health specialty promotes dental health through organized community efforts. This specialty combines science and art with dental health education of the public through research and administration of group dental care programs (ADA, 2015).
- *Orthodontics and Dentofacial Orthopedics:* The orthodontics and dentofacial orthopedics specialty involves diagnosis, prevention and correction of malocclusion, and neuromuscular and skeletal abnormalities of the orofacial structures (ADA, 2015).
- *Oral and Maxillofacial Pathology:* Oral and maxillofacial pathology is a dental specialty dealing with diseases affecting the oral and maxillofacial regions. This specialty focuses on the discipline of pathology associated with the nature, identification, and management of oral disease (ADA, 2015).
- *Oral and Maxillofacial Radiology:* Oral and maxillofacial radiology is the specialty which involves the production and interpretation of images and data produced by radiant energy used in the diagnosis and treatment of oral and maxillofacial region diseases, disorders, and conditions (ADA, 2015).
- *Oral and Maxillofacial Surgery:* Oral and maxillofacial surgery specialists provide diagnoses and surgical and adjunctive treatment of functional and aesthetic aspects of hard and soft tissues of the oral and maxillofacial region relating to diseases, injuries, and defects (ADA, 2015).

- *Pediatrics:* Pediatric dentistry is an age-defined specialty providing primary and comprehensive preventive and therapeutic oral care for infants and children through adolescence (ADA, 2015).
- *Endodontics:* The endodontics specialty focuses on the morphology, physiology, and pathology of dental pulp and periradicular tissue. Endodontists study the biology of normal pulp and the etiology, diagnosis, prevention, and treatment of pulp and associated periradicular related diseases, injuries, and conditions (ADA, 2015).
- *Periodontics:* The periodontics specialty deals with the prevention, diagnosis, and treatment of diseases of the supporting and surrounding tissues of the teeth and maintaining their health, functionality, and aesthetics (ADA, 2015).
- *Prosthodontics:* The prosthodontics specialty involves diagnosis, treatment planning, rehabilitation, and maintenance of oral functionality for patients with missing or deficient teeth or oral and maxillofacial tissue loss (ADA, 2015).

Dental Industry

Dentistry is a small business model that has been long dominated by solo practitioners where the dentist owns and manages the practice while providing clinical care to patients. Guay, Warren, Starkel, and Vujicic (2014) identified four primary business models of dentistry: the solo and small group practitioner, DSMO, corporate-owned DSO practice, and the nonprofit practice. Garcia (2014) determined that over 84% of the close to 200,000 dentists are owners of their practices with more than half of all practices led by solo practitioners. The DMSO model is where the dentist maintains ownership of the practice and provides clinical care for patients while a professional

services organization provides nonclinical managed services (Guay et al., 2014). The DSO model is where the dentist provides clinical patient care as an employee of a practice or group of practices owned and managed by a corporation (Weinberger, 2014). Generally, nonprofit or not-for-profit practices focus on providing dental care services for disadvantaged populations or train and develop healthcare professionals (Guay et al., 2014). While the solo or small group dentist-owned practice continues to be the predominant form of dental ownership, statistics are showing a significant shift toward the other models of dentistry. Additionally, all of these models of dentistry have overlapping variations and characteristics, creating the potential for a dynamic future for the dental industry.

Dentistry includes general practitioners and specialty dentists. There are just under 200,000 dentists working in dentistry in the United States who are part of over 125,000 firms (Gupta, Vujicic, Munson, & Nasseh, 2017). The United States dental industry total expenditures were $124 billion in 2016. The ADA (2017b) said the source of expenditures in 2016 included private insurance (46%), out of pocket private pay (40%), public insurance (12%), and other (2%). Of the approximate 200,000 dentists in the US, general practitioners make up 80% of all dentists who perform routine oral healthcare procedures along with dental cleanings, check-ups, and screenings for oral diseases, sealants, fillings, root canals, and crowns. Of the nine dental specialties recognized by the ADA, pediatrics and periodontics represent 15% of the total number of dentists (Gupta et al., 2017). The other five specialties make up the remaining 5% (Gupta et al., 2017). In summary, the dental industry in the United States is comprised of

approximately 160,000 general practice dentists and 40,000 dentists practicing in one of nine specialties. This study will target the predominant general practice dental population.

Business management. Dentists are highly trained to provide clinical treatment and care for their patients but are not trained as small and medium-sized enterprise (SME) business leaders. Solo or small group practice dentists fill the role of clinician manager, which requires leadership education, and training that has not been a part of traditional academic curriculums for dental school graduates (Taichman et al., 2012). Increased business complexity adds to the traditional business functions of staff management, sales and marketing, finance and administration, payroll, customer service, regulatory compliance, purchasing and many other aspects of leading a small business (Guay, Wall, Petersen, & Lazar, 2012). Taichman et al. (2012), explained how dentistry is dramatically changing from oral health to research and discovery and causing increased complexity in leading a successful and sustainable dental practice. The solo or small group practitioner is expected to be the leader of the dental team, which normally includes, (a) the dentist, (b) dental hygienists, (c) assistants, (d) administrative staff, (e) receptionists, (f) financial coordinators, (g) office managers, and (h) sterilization technicians (Solomon, 2012). In addition to their primary role of providing clinical care for patients, dentists have the added responsibility for managing an increasingly complex technologically driven business while leading the normal functions of a traditional business enterprise. Leadership training and development for the dental practitioner could

lead to improved business performance outcomes and financial sustainability, supporting the need for this study.

Leading the business aspects of a medical practice while at the same time providing quality clinical care to their patients presents a challenge for many practitioners. Kippist and Fitzgerald (2009) studied medical clinical managers filling the dual role of providing clinical care and leading the business aspects of the medical practice. After studying 14 medical clinic managers Kippist and Fitzgerald (2009), concluded that one of the two roles suffered by either neglecting a portion of their clinical duties or their management responsibilities. Manakil, Rihani, and George (2015) explained how solo or small group dental practitioners model the medical industry and place dentists in a position without adequate leadership skills or the desire to manage the business aspects of a dental practice. Successful companies require effective business leadership and management support to be successful. Further study of strategies addressing the increasingly complex dental industry could lead to new models that include aspects of the management services central to the MSDSO and DSO models.

The unmet need for business management and leadership skills training for dental school students is resulting in some educational institutions attempting to address this important skill development requirement. The University of Southern California, School of Dentistry, provides an 11-week program addressing communication styles, managing people, leading a team, building coalitions, conflict management and fiscal management (Slavkin, 2007). The Harvard School of Dental Medicine offers a third-year course focused on management and leadership concepts titled, *Dental Health Care Delivery:*

Concepts of Oral Health Leadership (Kalenderian, Skoulas, & Friedland, 2010). The University of Michigan uses a Scholars Program in Dental Leadership (SPDL) throughout the 4 years of the dental curriculum (Taichman, Green, & Polverini, 2009). The need for the development of critical business management and leadership skills remain largely unmet for the majority of graduating dentists as a result of the broad difference in approach to business management and leadership skills training in educational institutions and the absence of training in the preponderance of dental schools. Research on how dental practitioners have developed the needed leadership skills following graduation could lead to improved sustainability and effectiveness.

Dental Industry Dynamics

Changes in the dental industry continue to cause industry leaders to identify policy takeaways to help dental professionals navigate the changing environment. In 2013, the ADA published a report on the dental landscape and identified the multiply ways the dental profession is in transition (Vujicic, Hilton, Antoon, Kiesling, Paumier, & Zust, 2014). In this report, the ADA identified the key issues of; dental care utilization; dental care expenditures; population demographics; consumer dental care-seeking behavior; increased dental school capacity; changing dental care delivery models; the rising cost of dental education; the Affordable Care Act; and dental care delivery and financing (as cited in Vujicic et al., 2014). For each of these issues, the ADA reported on specific key findings and identified key policy takeaways as information that can be used by dental professionals to navigate the future of the dental profession. This report and the

associated takeaways provide further indications of the dynamic nature of the dental industry and the need for deploying effective strategies by the local dental practitioner.

As with most industries, the dental industry continues to experience significant change disrupting the traditional solo or small group doctor owner practice model. One area changing in the dental industry is the prevalence of oral diseases, science and technology innovations and market forces (Ballit, 2014). Taichman, Taichman, Inglehart, and Habil (2014) pointed to increased regulation, rapid technological change, increased competitive pressures, unpredictable economic conditions, uncertain dental benefit coverages, and process innovation as causing many dental practitioners to struggle to keep pace with the changing environment. With widespread changes in the dental industry economics, technology, demographics, education, training and leadership, and competition, dental practitioners need to change and adapt in increasing measure. As targeted by this study, identifying how dental practitioners adapt systems, processes, and strategies, based on new conditions and a changing competitive environment can lead to increased business sustainability, viability, and competitiveness.

Practice models. Dental industry dynamics continue to cause fewer dentists to enter dentistry as solo practitioners creating significant growth of emerging practice models. As the dental industry consolidates with dental groups forming rapidly the traditional single location practice model is now competing with multiple location groups of multiple specialties and sizes says Cole et al., (2015). Guay et al. (2014) reported in a 15-year period from 1992 to 2007, the 50 largest dental firm receipts grew from 1.37% to 4.44% while in the same period, total receipts for multi-unit dental groups grew from

8.0% to 11.3% of the total industry. At just over 11%, this multi-practitioner and multi-unit model is a relatively small but growing segment of the industry. The measured growth of these models indicates an increasing trend away from the traditional solo practitioner model and could be an indication of the overall direction of the dental industry. Research on strategies the solo practitioner can deploy to compete with this dentistry model is needed.

The shift from the traditional solo practitioner model to the large multi-site dental group practice continues to gain momentum. The percentage of total receipts for dental offices with more than 20 employees or more increased to 20.1% in 2012 representing a 28% increase over the previous 10 years (Wall & Guay, 2015). Wall and Guay go on to report how the largest growth in receipts was in the very large firms with 500 or more employees where total receipts increased by more than 240% in the same period. Also in this same period was a growth of these very large firms with more than 500 or more employees from 1,172 to 3,732 locations, a 218% increase (Gesko & Bailit, 2017). Although large multi-site group practices represent only a small share of the total marketplace, this segment is growing rapidly and could negatively impact the solo and small group dental practitioner.

New dental graduates are making different choices in how they enter the dental profession. Nasseh and Vujicic (2017) reported a 70% reduction in the percentage of new graduates choosing nonaffiliated solo dentistry from 2001 to 2014. In the same period, the percentage of new graduates entering group dental practices increased from just fewer than 74% to over 92% (Nasseh & Vulicic, 2017). The multi-practitioner model is one

where some dentists practice together as a group (Guay et al., 2014). In 2014, the number of new graduates choosing to enter the dental industry as solo practitioners had devolved to under 8%. These statistics indicate a significant shift away from the traditional doctor-owned solo practice model and gives rise to new and emerging models of dentistry in the future.

Economics. While there have been significant changes in the economics of dentistry, many in the dental profession ignore indicators of economic change. Dentistry incomes have been slow to recover from the economic downturn of 2008 and 2009 and largely remained flat since 2000 (Nasseh & Vulicic, 2017). The dental profession has a cultural history where media, academia, and practitioners negatively view the use of business practices in dentistry (Dancer & Taylor, 2017). This cultural distinctive enables a lack of focus on business systems and attention to the use of business strategy and operational excellence in dentistry. Further research is needed on business acumen and strategic focus by the solo and small group practitioner to avoid a lack of financial sustainability and security.

An area of shifting dental economics is a shift from heavy disease repair and replacement to a predominant focus on prevention and oral health maintenance. This shift is attributed largely to improved oral health for people born after 1970 extensive fluoridation of the public water supply was introduced (Eklund, 2010). The documented downward trend in dental caries in children born after the *fluoridation era* is carrying over into adulthood (Rozier, White, & Slade, 2017). Eklund reported that having fewer and less extensive teeth repaired as children continues into adulthood as these adults

require fewer crowns and heavy restorations. Fewer crowns and a reduction in heavy restoration cases results in a higher percentage of lower cost products and services for the dental professional (Eklund, 2010). Ecklund predicted how this shift from a disease-based practice, focused on repair and replacement, to one focused on routine check-ups and oral health maintenance may result in dental practitioners having to increase the number of patients and shift treatment offerings to achieve economically sustainable revenue levels. Traditionally, crowns and heavy restorations have been a source of significant income for the dental practitioner. Further research is needed to understand how the financial model for solo and small group dental practitioners changed as a result of the changing treatment needs.

Decreased edentulism in adults is an area where improved oral health continues to impact dental industry economics and dental practice income levels. Rozier, White and Slade (2017) reported a significant decline in edentulism across all age groups and socioeconomic populations in the United States since the 1970s. Reduced levels of edentulism are one factor contributing to reduced demand for dental services from the adult population and have contributed to dentist earnings remaining flat since 2000 (Nasseh & Vujicic, 2017). An increasing proportion of patient visits to a dental practice requiring only low cost, low-profit maintenance fees is the result of improved oral health from reduced caries in adults and decreased edentulism of the general public (Brocklehurst, Ashley, & Tickle, 2011). The revenue model of the dental industry has shifted to high frequency, low margin dental care as edentulism and oral health has improved. Research on strategies to address slowing dental expenditures is a competitive

factor dental practitioners will need to consider.

Expenditure sources have also been a significant economic change for the dental industry. Soloman (2015) reported that in 1960, dental expenditures paid by some form of insurance was only 3% with 97% paid by the individual personally. By 2014, this ratio increased to over 50% of expenditures paid by private insurance while the portion paid by individually dropped to 35% (Solomon, 2015). Solomon also reported the broad introduction of public dental insurance programs representing over 14% of expenditures. The Affordable Care Act (ACA) and state Medicaid programs shift patients to managed public dental care plans (Solomon, 2015). With private and public insurance nearing 65% of all dental expenditures, solo dental practitioners find it difficult to profitably perform under the increased regulatory requirements, oversight and administrative requirements of these privately and publicly funded programs (Langelier, Wang, Surdu, Mertz, & Wides, 2017). Increased complexity and regulatory requirements are making it difficult for solo and small group dental practitioners to maintain the business systems and practices necessary to support the administration of complex insurance billing systems while treating patients.

The ACA, signed into law in 2010, included a key provision to expand Medicaid as a key source of funding for dental patient care. In 2000, 20% of all children in the United States had dental benefits coverage through Medicaid and the Children's Health Insurance Program (CHIP) (Nasseh & Vujicic, 2016). Haley, Kenney, Wang, Lynch, and Buettgens (2016) further reported by 2016 the number of children in the United States covered through Medicaid and CHIP had totaled 40%. Overall public insurance grew to

37% and the uninsured children rate was cut in half by 2012 (Vujicic, 2015). With an increasing portion of children covered by public insurance, dental providers will feel the pressure of reduced profit margins resulting from reduced reimbursement rates associated with public insurance programs. The tightening profit margins add to the overall economic environment affecting dental practitioners and the strategies needed to remain competitive.

Changing public health care benefits in the United States (Medicaid) is reshaping the dental benefits landscape considerably. Public dental benefits for children have increased as a percentage of the total population since the beginning of the century while adults with either private or public dental benefits have decreased steadily (Vujicic, 2015). Since the Medical Expenditure Panel Survey (MEPS) began in 1996, as of 2012, dental care use among children was at the highest-level while at the same time at the lowest level for working adults (Nasseh & Vujicic, 2016). Given this steady and consistent expansion of public dental care, the growth of children covered by dental care benefits and the corresponding decrease in private dental benefits, the economics associated with this new patient mix is a significant trend affecting the dental practitioner. Identifying effective strategies designed to adjust to this new economic reality will be an important factor in the economic sustainability of the solo and small group practitioner.

A factor influencing a decline in dental care visits to the traditional solo practitioner is the ACA classification of adult dental care. Vujicic (2015) explained how a significant driver of dental care demand is dental care benefits. Under the ACA, dental care for adults is not considered essential health care and not included as a covered

benefit and a major factor contributing to a 9.1 percent reduction in adult visits in dental offices between 2006 and 2012 (Vujicic, 2015). Dental expenditure growth estimates through 2045 are modest as compared to the more rapid growth since 1985 (Nasseh & Vujicic, 2015). With dental care benefits considered optional for adults purchasing health care benefits and the ACA not classifying dental care essential for adults, this trend of reduced adult dental care visits can be expected to continue resulting in an increasingly competitive environment for the solo and small group dental practitioner.

Significantly increasing dental service costs continue to create pressure on dental providers to find ways to reduce labor costs. From 1985 to 2011 the average cost of dental services rose by 258% compared to 200% for medical services and 109% for the Consumer Price Index (CPI) (Solomon, 2012). Solomon further explained how staff costs are one of the ways dentists can control costs. Containing labor costs is also the impetus behind some DSOs and educational institutions development of a mid-level dental provider who could perform dental procedures beyond those of the dental assistant and increase the productivity of the dental office at a lower labor cost (Solomon, 2012). Simmer-Beck et al. (2015) explained how midlevel providers, added to the dental workforce, could provide a lower cost model of dentistry. The mid-level provider role in the dental industry lacks definition or broadly deployed as the difference in salary between a new graduate dental associate, and the mid-level provider is not significant. Organizational models such as DSMOs and DSOs provide efficiencies and cost reduction options that address the increasing costs not availed to the solo or small group

practitioner. A broader deployment of mid-level providers would have a negative impact on the competitiveness of the of the solo or small group dental practitioner.

Since the early 2000s, the percentage of the population who utilized dental care has decreased for adults and increased for children. Nasseh and Vujicic (2015) studied dental service utilization of the U.S. population over the 10 years from 2001 to 2010 and identified a decrease from 40.5% to 37.0% for adults while in the same period, children increased from 43.2% to 46.3%. One of the most significant factors contributing to this shift in dental utilization is a change in the policies of publicly funded dental insurance for children. Many states dramatically increased access to dental care for children through Medicaid and Children Health Insurance Programs (CHIP) resulting in child dental expenditure growth from $756.1 million in 1990 to $7.4 billion in 2010 (Nasseh & Vujicic, 2016). During the same period, many states decreased dental care coverage for adults while employer-sponsored dental benefits coverages were reducing (Vujicic, 2015). These statistics show the importance of dental insurance benefits and how shifting economic factors and public policy can have an impact on dental providers and the ability of the dental practitioner to maintain a healthy and sustainable practice. Further research is needed to identify how the solo and small group dental practitioner can strategically address the shifting economics of the dental industry.

The subjective value placed by adults in the United States on dental care appears to be diminishing. Household dental care spending is one of three major categories that has not recovered following the recessionary period of 2007 – 2009 while household discretionary spending growth rates (inflation adjusted) in categories such as soft drinks,

alcoholic beverages, and package tours have all seen significant recoveries beyond prerecession spending rates (Bureau of Economic Analysis, 2015). Dental care spending by middle and high-income adults has been steadily decreasing since the early 2000s (Vujicic, 2015). A lack of recovery in dental care spending compared to other discretionary spending categories, dental practitioners should not expect to see future growth that is consistent with the overall economy. With dental care spending not keeping pace with the overall economic environment and adults choosing other areas of discretionary spending, dental practitioners will need to identify effective strategies as they experience continued difficulty in sustaining revenue and profitability.

Competitive pressure. One aspect of dental industry economics is where the supply of dentists in the United States is expected to increase while dental service demand is expected to flatten. Based on recent trends of increased retirement ages for dentists and dental school graduation volumes, the estimated per capita supply of dentists in the United States is expected to increase over the next 15 years (Munson & Vujicic, 2015). Contributing to the languishing economics of dentistry is the general concept of supply and demand as the supply of dental graduates has risen as dental schools have increased their capacity in recent years (Munson & Vujicic, 2015). Dental practice economic difficulties predicted as 42% of survey respondents stated their practice was “not busy enough” (Munson & Vujicic, 2015). In a separate study, researchers forecasted visits for dental treatment will decline through most of the next decade (Meyerhoefer, Panovska, and Manski, 2016). With an expanding number of dentists available in the workforce and a flattening demand for dental services, the competitive pressure on

dentists will continue to grow. Absent of specific strategies, competitive pressures could create a climate where the traditional solo practitioner could see a negative economic impact on their practice.

Researchers at the ADA, Health Policy Institute are predicting an increase in the number of full-time dentists over the next two decades. The ADA Health Policy Institute published a report predicting a steadily increasing supply of dentists per 100,000 people in the United States through 2037 (Vujicic, 2017). In a separate study, Meyerhoefer, Panovska, and Manski (2016) forecasted visits for preventive dental care would increase in the future, while visits for dental treatment will decline. An increasing number of dentists practicing in the United States and a slower growth of demand for dental treatment could contribute to an increasingly competitive environment for dental practitioners in the years to come.

Staffing. In the past 60 years, the staffing model for dental practitioners has shifted to a more extensive and diverse mix of personnel. Solomon (2015) reports that in 1950, there was an estimated total of 155,000 people working in the dental industry, of which half were licensed dentists with the other half comprised of dental hygienists, dental assistants, and other administrative staff. Nasseh and Vujicic (2015) explain how the economics of the dental industry has been changing over the last two decades. By 2012, the total number of people working in the dental industry had increased to almost 1,000,000 people (Solomon, 2015). Solomon (2015) went on to report that while this six-fold growth is significant, a more substantial change is in the make-up of the dental workforce population with the category of other administrative staff members increasing

from 12.9% in 1950 to more than 30% in 2010. In 1950, the average net revenue for dental practices was 58.4%, and by 2010, this number had reduced to 27.4% (Solomon, 2015). The increase in administrative staff not involved in direct clinical care needs to be explored as overall profitability for the practice could be affected and signals an increase in expense and organizational complexity.

Solo and small group dental practitioners make up a significant portion of the dental industry, a subset of the small- and medium-sized enterprise (SME) segment of the United States economy. SMEs represent a significant portion of the U.S. economy by generating more than 50% of private gross domestic product (GDP) and provide two out of every three new jobs (Flynn & Davis, 2016). Flynn and Davis (2016) identified SMEs as the driving force of the United States economy by employing more than half of the private sector workforce. While SMEs represent a significant part of the United States economic engine, SME failure rates are high for the first five years in operation (Small Business Administration, 2017). With SMEs representing a significant position in the overall United States economy, a high failure rate for start-up SMEs could prove problematic. This high failure rate indicates how SME business owners, including solo and small group practitioners, need leadership and business management skills to sustain ongoing viability.

A distinct structural difference between medical and dental practice in the United States is the absence of mid-level providers in dentistry. Nurse practitioners and physician assistants are used in the medical model while dentistry has not readily embraced similar models (Simmer-Beck, Walker, Gadbury-Amyot, Liu, Kelly &

Branson, 2015). Simmer-Beck et al. (2015) reported how midlevel providers, also referred to as dental therapists or dental nurses, added to the dental workforce, as a considered form of dentistry, could increase access to affordable and quality oral health care for certain segments of the underserved dental population in the U.S. However, concerns for patient safety, efficacy of treatment and the extent these mid-level providers could provide treatment that is only provided by dentists remains a concern for many (Solomon, 2015). The concept of a mid-level provider or the role of dental therapists as a method of providing dental care has not been broadly adopted and utilized in the United States. Given this lack of adoption, the economic viability of the midlevel provider as part of the dental industry workforce is not clearly understood, as is the potential impact on solo and small group dental practitioners.

The midlevel provider in dentistry is conceptually a solution to providing access to dental care to underserved populations in the United States. There are a significant number of areas in the United States designated as dental health professional shortage areas where there is a ration of 5000 or more people to 1 dentist (Taylor, 2016). Taylor (2016) reported how the parallel of low provider availability and high levels of underserved populations led to the development of the nurse practitioner in the medical industry. Solomon (2015) questioned how midlevel providers or dental therapists will be able to identify a substantive niche of procedures that only dentists are capable of and licensed to perform. Solomon (2015) estimated the use of these lower cost dental providers could be best deployed in a large group dental practice environment and questions how the underserved populations benefit from this model. There are some

directional trends the dental industry is following as it relates to the medical industry. With a lack of adoption and a clear method of leveraging midlevel providers, the midlevel provider concept does not appear to be a viable solution to providing dental care to a large number of underserved populations in the United States.

Critical to the effectiveness of a dental practice is how the people function within the business. One important component of a business system is the interaction and functioning of the people within the system (Moeller & Valentinov, 2012). The human component of a business system is an important consideration as the collective efforts of the people functioning within the system significantly influences the effectiveness of the organization (Salmona et al., 2015). Moeller and Valentinov (2012) described how the people within a business interact with the various functional systems and components of a business. People perform more effectively when the business leader considers the interaction of the people within the business system to provide their people with an understanding of the goals and objectives of the business as a whole (Moeller & Valentinov, 2012). The link between business success and the effective functioning of the people within the system indicates how business owners, including solo and small group practitioners, need leadership and business management strategies to sustain ongoing viability.

Education. An area of significant change in dentistry has been the cost of dental education. The American Dental Education Association (ADEA) has conducted an annual survey of dental school seniors since 1978. This survey has a significantly high response rate of 84% of all graduating dental school seniors in the United States. The

survey has participation from all U.S. dental schools with graduating classes, and survey respondents came from all 58 dental schools (Wanchek, Cook, Anderson, & Valachovic, 2016). A significant focus of the survey was the total educational debt for graduating seniors. Researchers determined total education debt has increased to an average of $262,000 for graduating dentists in 2016 (Wanchek et al., 2016). Additionally, 38% of those graduating seniors planned to pursue advanced specialty dental education, significantly adding to the individual debt burden (Wanchek et al., 2016). Educational debt and the associated repayment burden is an economic dynamic needing further understanding. Dental graduates with large educational debt may not be in a financial position to invest in the traditional doctor-owned dental practice.

Demographics. The demographics of the dental practitioner is shifting from a predominate number of dentists known as baby-boomers to a group known as millennials. Baby-boomers are a group of people born between 1946 and 1964. There were a total of 76 million baby-boomers, and as a group has represented a large proportion of all dental practitioners since the early 1990s. Millennials are people born between 1981 and 2000. As the baby-boomer dentists retire, a generation of millennial dentists will emerge as the predominant proportion of dental professionals. In 2015, over 40% of all active dentists were born during or before the baby boom (Solomon, 2015). With an average retirement age in the mid to late ‘60s, the boomer generation of dentists will significantly diminish over the next decade (Munson & Vujicic, 2015). In parallel, by the end of 2020, millennials will make up over a third of the global workforce (Van den Bergh & Wulf, 2017). Chaudhuri and Ghosh (2012) highlighted the generational

transition and the significant implications for business organizations resulting from the shift from the boomer generation to the millennial generation of dentists. Further understanding of the implications for retiring solo and small group practitioners and how to engage this millennial generation of dentists.

Leadership education. The solo dental practitioner is leading a small business enterprise. Several components make up a dental practice system. While dental schools deliver the clinical skills needed to provide the clinical services of a practice, many practitioners are increasingly frustrated with the complexity of leading and managing a dental practice (Moeller & Valentino, 2012). Dental school academic curriculum do not adequately educate dentists on the business systems used for marketing, payroll, human resources, operations, and other necessary administrative functions of a dental practice (Manakil, Rihani, & George, 2015). Taichman et al. (2014) researched perceived leadership related educational experience for practicing dentists who indicated their predoctoral education had not provided the leadership skills required post-graduation. It is no longer an option for solo and small group dental practitioners to lack the skills and abilities to manage and lead the system requirements of the dental practice (Manakil et al., 2015). Dental owners must take measures to upgrade their business skills just as dentists regularly develop clinical skills (Taichman et al., 2014). Dental practitioners, while working to provide patients with excellent clinical care, are also required to manage and lead the complexities of a small business and the regulatory requirements of the dental industry. Many dental practitioners may not feel adequately equipped with the needed skills to manage the non-clinical aspects of the business of dentistry effectively.

The skills necessary to operate and lead the business aspects of a dental practice are often not addressed as part of the dental educational process. Solo or small group dental practitioners need to effectively and efficiently operate and lead a dental practice (Taichman et al., 2014). The focus and attention of dental schools are on clinical proficiency and expertise. Dental school graduates feel confident in working as part of a dental team with 73% expressing reluctance to take on the responsibilities of managing and leading a dental practice due to a lack of knowledge and experience (Manakil et al., 2015). Siggelkow (2011) determined that successful business leaders achieve success by developing skills such as business strategy development and implementation, decision-making, and management. Taichman et al. (2014) concluded, based on a lack of training and education, the solo or small group dental practitioner is left to develop leadership and business management skills over time to succeed in business. Research on how solo and small group practitioners gain business management and leadership skills is needed.

A critical aspect of the role of a dental practitioner is the process of leading and managing change to respond to industry dynamics. When evaluating the process of managing change in a medical or dental environment, Beecham, Dammers, and Zwanenberg (2004) conducted a six-month pilot program where the researchers provided leadership coaching support for 8 medical general practitioners. Taichman et al. (2014) identified a lack of coaching and leadership development for medical general practitioners in the United Kingdom. The coaching process focused on the whole person with an emphasis on producing action and uncovering learning that can lead to increased fulfillment, balance, and productive lifestyles. At the end of the pilot, the participant

feedback was summarized and found to benefit the practitioners in their strategic thinking, changing unhelpful behaviors, improving interpersonal relationships, increased work-life balance, and reduced stress (Beecham, Dammers, & Zwanenberg, 2004). The results of this study and the identified lack of leadership and business management training is an area of potential aptitude need of the dental practitioner.

DSOs

As the medical industry continues the trend toward consolidation and doctor employment, solo and small group dental practitioners could see this as an indication of the direction of the dental industry. Independent private practice dentistry is more difficult to sustain than in the past and is following the path set by the medical industry, which has experienced a significant consolidation into Medical Service Organizations (MSOs) (Garcia, 2014). The number of medical solo practitioners has gone from just over 40% in 1983 to under 20% in total, and for physicians under age 40, the share of solo practitioners drops to 10% in 2014 (Kane, 2015). Another change seen in the medical industry is where physicians in practices with less than 11 doctors dropped from just under 80% in 1983 to just over 60% in 2014 (Kane, 2015). These statistics provide evidence of how the medical industry model has changed dramatically and a potential foreshadow of the direction the dental industry could take.

Just as the medical industry has moved toward MSOs, dentistry is consolidating into a growing trend toward Dental Service Organizations (Cole et al., 2015). Langelier et al. (2017) explained how DSOs manage non-clinical aspects of a dental practice such as; employment and human resources, finance and accounting, regulatory compliance,

property management, purchasing services, and information technology support services. In general, a DSO will contract with dental practices to provide critical business management and support of all non-clinical operations. Solo and small group practitioners will compete with highly efficient DSO supported dental practices.

Large dental groups operated by DSOs are expanding rapidly. Cardillo (2017) shared how multi-site dental groups and DSOs are growing across the board and becoming a highly influential part of the dental industry. Langelier et al. (2017) identified a 54% increase in the number of dental firms with 50 or more employees, and the number of dental locations operated by large firms more than doubled over the 10 years beginning 2002 and ending in 2012. In the category of very large firms (1,000 or more employees), the number grew from 3 firms operating 788 locations in 2002 to 11 firms operating 3,005 locations in 2012 (Langelier et al., 2017). Langelier et al., (2017) reported how the full market penetration of DSOs is not clear as some DSO affiliations are fully branded and obvious while others are completely transparent to patients and the public, in general, making the DSO market share difficult to quantify. While statistics relative to the full extent of market penetration of DSOs is not clear in the dental industry, the growth in large firms with multiple locations and large numbers of employees is a meaningful indication of industry consolidation.

As multi-site dental groups and DSOs continue to grow, several models are forming. Langelier et al., (2017) explain the DSO configurations vary widely from dentists as employees to doctor-owned solo practitioners who enter into a subcontract managed services agreement with a DSO for specific administrative activities. Frank

(2017) describes what he calls a Doctor-owned Dental Service Organization (DDSO) model, where doctor owners can benefit from DSO support in managing non-clinical activities. Frank (2017) described how practitioners benefit by DDSO management systems that include passive income, vertical business opportunities, creative mergers and acquisitions, multistate expansion, dual-entity approaches, economies and efficiencies of scale, and continuing education technology solutions. The emerging DDSO model provides highly efficient and modern private practice management systems, coupled with the benefit of continued doctor ownership. Further understanding of the DDSO model and adoption is needed to understand the competitive implications for solo and small group dental practitioners.

Growth. DSOs and DDSOs can allow dentists to maximize their practice by leveraging the support and efficiency of professional office management, enabling dentists to focus on excellence in patient dental care while administrative systems and business management structures maintain operational efficiency and effectiveness. Cole et al. (2015) predicted a majority of dentistry will practice as part of a group by 2025. Cardillo (2017) outlined six natural stages of growth from solo practitioner to a fully functioning DSO. These stages are; 1, Solo Practitioner (solo doctor operating a single office); 2, Entrepreneurial (two to three offices with one or more doctor); 3, Foundation Development (four to nine offices with multiple partner or associate doctors); 4, Platform for Growth (ten to 20 offices); 5, Organizational Evolution (21 to 40 offices); and 6, Leadership and Vision (more than 40 offices). As a practice progresses through these stages, the level of operational and organizational complexity increases. Navigating these

stages and having the capacity to invest in the infrastructure requirements of each growth stage could lead to increased consolidation in the dental industry as a whole.

The number of dentists associated with a DSO has steadily increased while the number of solo practitioners steadily declines. Researchers for the ADA, Health Policy Institute, have published the first report where researchers identified a total of 8.3% of dentists affiliated with a DSO in 2016, an increase of 12.1% from 2015 (ADA, 2017a). The researchers also reported a disproportionate number of younger dentists affiliated with DSOs as just under 20% of dentists under the age of 35 practice as part of a DSO (ADA, 2017a). Wanchek, Cook, Anderson, and Valachovic (2016) reported new graduate student debt and the limited financial capacity of these new dentists to finance ownership of an existing dental practice is a deterrent to ownership. Although research on the trends associated with DSO participation is relatively limited, the initial data coupled with a disproportionate number of younger dentists practicing in a DSO environment indicate a continuing trend of DSO growth and market share. As DSOs continue to expand, solo and small group practitioners will realize continued pressure from DSO competition in the marketplace.

An increasing number of baby boom-era dentists will be retiring in the years to come making a large number of dental practices available for purchase by a small number of qualified independent buyers. The baby boom-era dentists are expected to diminish significantly by 2025 (Soloman, 2015). These dental practice owners will want to sell their practice to a limited number of new graduate dentists capable of purchasing a practice due to high debt from student loans and a lack of adequate experience managing

and leading the complexity of a fully functioning dental practice (Wanchek et al., 2016). Corporate entities, such as DSOs with ready access to capital, will be able to purchase practices that will be available for sale from retiring dentists. This economic dynamic could further influence the growth of DSOs and the transition away from the single or small group dental practitioner, creating increased competitive pressure in the market place.

There are several key factors fueling the growth of large group practices and DSOs. Dentists who owned and operated their practice totaling over 90% of all dentistry in 1990 has decreased to less than 85% by 2014 (Garcia, 2014). Issues such as, (a) reduced real net income, (b) decreasing use of dental care by the American public, (c) shrinking employer-sponsored dental care insurance, increased state and federal regulatory requirements and compliance costs, and (d) increased costs of supplies and technology are all documented issues faced by the traditional solo practitioner (Cole et al., 2015). These administrative headaches, coupled with an increasing imbalance of time between clinical duties and administrative tasks, continue to cause a growing dissatisfaction among solo and small group practitioners (Cole et al., 2015). This dissatisfaction could contribute to an increasing proportion of dentists choosing to practice as part of a DSO.

Large group dental practice and DSO leadership can take advantage of several economies of scale not available to the solo dental practitioner. DSOs employ trained salespeople, professional marketing teams, and in-house efficiency experts focused on optimizing processes, procedures, and patient scheduling (Weinberger, 2014). DSOs are

generally more efficient, more competitive, and operate at lower costs than traditional sole-proprietor offices as DSOs benefit from economies of scale, increased purchasing power, and access to capital (Garcia, 2014). DSOs have also provided a lower-priced alternative from traditional solo-practitioners and can accept a larger breadth of insurance plans compared to solo-practitioner offices (Garcia, 2014). These economies of scale enable a large group dental practice to operate with increased efficiency and improved profitability in comparison to the traditional solo practitioner. These efficiencies create a competitive disadvantage for the solo practitioner compared to their DSO contemporaries.

Distinctives. Large group dental practices have many positive attributes and at the same time, have some negative aspects that prevent dental practitioners from systematically abandoning the traditional solo or small group doctor-owned practice model. Dentists who practice within a large group dental practice or DSO shift from being owners and partners to employees focused strictly on clinical duties (Weinberger, 2014). There has been a 70% reduction in the percentage of new dental graduates choosing nonaffiliated solo dentistry from 2001 to 2014 (Nasseh & Vujicic, 2017). Weinberger (2014) goes on to report how employed dentists versus practice owners, see a significant reduction in financial rewards and personal freedom. While the dentists find it desirable to focus on the clinical aspects of patient care, the dentist loses freedom, control, and input in how the office functions operationally. This loss of control over administrative activities such as staffing, compensation, scheduling, and pricing along with a reduced level of personal income as compared to their solo practitioner

counterparts can be a source of frustration for the dental practitioner accustomed to a high degree of autonomy.

DSOs present a formidable competitor to the traditional solo and small group practitioner. Dental practitioners operating within a DSO increase doctor productivity from an average of 60% to an average of 90% through the reduction of administrative and non-patient related responsibilities (Cole et al., 2015). State Medicaid programs are increasingly shifting patients to managed dental care plans where some DSOs can leverage highly efficient operations with low operating costs to treat patients at lower individual costs to accommodate lower insurance benefit reimbursements from public dental benefits programs (Langelier et al., 2017). Efficient and productive dental practices are more likely to succeed in an environment where a growing percentage of the U.S. population is using public healthcare.

One of the factors reported as a strategic advantage for DSOs is increased efficiencies. Researchers in studying the number of patients seen per year found in a comparison between solo general dentists and a large group dental health maintenance organization in Minnesota found the solo practitioners saw an average of 34% fewer patients per year (Gesko & Bailit, 2017). Gesko and Bailit (2017) determined how the increased number of patients in the large group practice attributed to an average of 61% more dental hygienist hours per year per dentist. Solomon (2015) reported the administrative portion of the dental workforce for solo practitioners has increased from 12.9% in 1950 to more than 30% in 2010. The increased number of patients seen by large group practices coupled with a higher proportion of administrative staff for solo

practitioners reveals a strategic and notable difference between solo practitioners and large group practices. The ability of large group dental practices to see a significantly larger number of patients per year per dentist is a key advantage that could further advance the DSO growth rate, creating increased competition for the solo and small group dental practitioner.

Given the significant consolidation of the medical industry and the rapid growth of DSOs, many people in the dental profession are beginning to question the veracity of the classic, doctor-owned business model. According to the ADA, the number of dental offices operated by a DSO grew by 25% in the two years between 2009 and 2011 (ADA, 2017a). Weinberger (2014) explained the lure of practicing dentistry in a DSO environment is how the dentist is allowed to more readily focus on practicing dentistry by removing the non-clinical aspects of leading a dental practice. Dentists are trained clinicians as a specific career choice. The added burden of marketing, sales, accounting, legal, and human resources could take away from a dentist treating patients making the DSO model increasingly attractive.

Literature Review Key Concepts and Findings

This review of the academic literature provided an articulation of GST and how it applies to the overarching research question of this study. Also provided was a comprehensive review of literature about the dental industry, the history of dentistry, the dynamics facing the industry, and the solo and small group practice doctor owner. The primary dental industry dynamics discovered in this literature review are, (a) overall oral health of the U.S. population has improved as a result of the *fluoridation era* resulting in

an overall decrease in per capita demand, (b) the supply of dentists is increasing while the average retirement age for dentists is increasing resulting in a larger number of dentist competing for a share of the dental revenue potential, (c) significant student loan debt for graduating dentists has created an economic burden for dentists starting their careers, (d) the transition from private pay and private insurance to a greater proportion of public insurance has increased complexity and reduced average income for providers, (e) increasing technology, regulations, and business management complexity have made the management, leadership, and administrative responsibilities for a dental practice more difficult, (f) expansion of DSOs and large group practices has resulted in increased competition in the marketplace, and (g) increased government regulations, rising supply costs, and competitive labor markets have made practice overhead difficult to contain.

Transition

Section 1 focused on providing a foundational understanding of the subject of this study, the research problem, the purpose, and the nature of this qualitative research study. The research question, along with the interview questions, are included with an articulation of the conceptual framework. I also provided the known assumptions, limitations, and delimitations inherent in this study. The significance of the study, along with potential contributions to business practice and the implications for social change, were also identified. I conclude Section 1 with a review of the professional and academic literature about the study topic. The current literature on strategies some solo and small group dental practice owners use in a new competitive market, including DSOs, is limited. DSO growth and influence is a recent dynamic, and a gap in specific literature

exists. The identified limitations and a critical review of the relevant literature validates the need for research in this area. The literature review concludes with a summary of the primary dental industry dynamics dental practitioners are facing.

Section 2 presents the project. I begin Section 2 by restating the purpose statement, providing an explanation of the role of the researcher, describing the eligibility criteria for study participants, and explaining strategies used to gain access to and create a working relationship with the participants who align with the overall research question. Section 2 also provides an explanation of the research methodology and design, along with a justification for the use of the method and design in this project. Section 2 also includes ethical and reliability considerations used along with data collection instruments and techniques, data organization, analysis, reliability, and validity techniques used.

Section 3 presents the research findings, describes the applications to professional practice, and the implications for social change. I then provide my recommendations for further research and personal reflections. Section 3 concludes with a summary and study conclusion.

Section 2: The Project

The objective of this qualitative multiple case study was to explore the strategies some solo and small group dental practice owners use in a new competitive market including DSOs. Exploration involved understanding the strategies used by solo and small group dental practitioners to successfully compete in a dynamically- changing environment with growing competition from DSOs. Section 2 includes a restatement of the purpose statement, the role of the researcher and participants, research method and design, population and sampling, ethical research, and data collection and data analysis processes.

Purpose Statement

The purpose of this qualitative multiple case study was to explore the strategies some solo and small group dental practice owners use in a new competitive market including DSOs. The targeted population was five solo and small group dental practice owners in central Kentucky who demonstrated success in developing and leveraging strategies designed to compete with DSOs. Successful dental practices could contribute to the local economy by providing ongoing jobs for members of the community including dentists. An additional possible implication for positive social change is ready and reliable access to dental services for people who reside in central Kentucky communities.

Role of the Researcher

My role as the researcher was to perform a qualitative multicase study to identify strategies some solo and small group dental practice owners in central Kentucky use in a new competitive market including DSOs. Specific to my role as a researcher was the

selection and identification of an appropriate research methodology and design. Marshall and Rossman (2016) explained the principal role of the researcher is to collect data to assess a phenomenon. Qualitative studies involve the interviewer filling the role of the instrument (Schoenherr, Ellram, & Tate, 2015). Marshall and Rossman (2016) further explained how the researcher in qualitative inquiry is an integral instrument in the collection of data and participant perspectives relative to a given phenomenon. Researchers are the collection instruments in qualitative research (Hoeber & Shaw, 2017). As the researcher, I was responsible for selecting and recruiting appropriate participants who provided needed data and perspectives on the given phenomenon. I gathered needed data and participant perspectives through semistructured in-person interviews and an appropriate review of documents gathered from solo and small group practitioner participants.

As a researcher, I used the guidelines outlined in *The Belmont Report* to maintain acceptable standards for the protection of participants' rights during the research process. Researchers must not harm participants and respect their privacy and confidentiality, as well as maintain the integrity of the scientific process (Babbie, 2016). As outlined in *The Belmont Report* (U.S. Department of Health and Human Services, 2014), and through the use of an informed consent form, I explained to the participants the purpose of the study and any potential risks, incentives, consequences, and benefits that existed. I also assured the participants their names would be strictly confidential in this process.

Personal bias was mitigated throughout the data collection process. Qualitative research has an inherent potential for personal bias as a result of the interpretive nature of

the research methodology (Hancock & Algozzine, 2016). Researchers have the responsibility to avoid bias during the data collection and analysis process (Marshall & Rossman, 2011). Chamberlain (2016) said one way to avoid personal bias is the use of a standard practice or protocol. Interview protocols help researchers stay focused on the study topic during the participant interview process (Yin, 2018). Having worked in a large group practice focused on the orthodontics specialty, I mitigated bias by avoiding participants practicing orthodontics. I also did not select participants who I have previously connected with or had a relationship with as a result of my work in the dental industry. Following an interview protocol (see Appendix), I used semistructured interviews and observations to mitigate bias as I explored the strategies some solo and small group dental practice owners use in a new competitive market including DSOs.

Participants

Study participants were recruited based on the guidelines and protocols of the Walden Institutional Review Board (IRB) and *The Belmont Report* (U.S. Department of Health and Human Services, 2014). In qualitative case studies, researchers should deliberately select research participants who can specifically respond to research questions and the associated study topic (Yap & Webber, 2015). Furthermore, it is the responsibility of the researcher to determine eligibility criteria that align with the overarching study topic (Whiting et al., 2016). The eligibility criteria for participants in this study was that they were solo or small group dental practice owners and practitioners who practiced dentistry in central Kentucky and were willing to share in-depth information relating to the research project.

Access to study participants was gained through personal and professional relationships. As potential participants were identified in central Kentucky, a formal email detailing the goals of the study was sent informing potential participants of the eligibility criteria, and asked if they would be willing to participate in the research project. Participants who agreed to participate in the project and met eligibility criteria were provided detailed information relative to time commitments as well as an explanation of my responsibility to ethical research and their protection as participants in this study through an informed consent form. Participants were assured of confidentiality efforts and measures being taken relative to the security of data and information collection during and following the study.

Research Method and Design

The purpose of this study was to explore the strategies some solo and small group dental practice owners use in a new competitive market including DSOs. I reviewed qualitative, quantitative, and mixed methods methodologies to determine which would be the most appropriate for this study. The following sections begin with an explanation of the research method used for the study along with justification regarding why this method was appropriate. This section continues with a discussion of the research design and its associated applicability.

Research Method

Researchers can use quantitative, qualitative, and mixed methods methodologies for research exploration (Merriam & Tisdell, 2016; Saunders et al., 2015). I used the qualitative method for my research. I selected the qualitative method to identify strategies

used by solo and small group dental practice owners to be successful in a new competitive market including DSOs. Researchers use the qualitative method to understand the perceptions and attitudes of research participants and explore their experiences (Merriam & Tisdell, 2016). Qualitative researchers have the flexibility to explore a phenomenon through the use of open-ended interview questions (Lee & Krauss, 2015). By using the qualitative method, I was able to provide an in-depth description of the phenomenon using direct fieldwork observations, documents, and open-ended interviews.

Researchers use the quantitative method to identify specific numerical relationships or differences among variables (Yin, 2018). Quantitative researchers test predefined variables and hypotheses to determine statistical significance and relationships (Babones, 2015). The quantitative methodology did not fit this study as the nature of my research was to explore the phenomenon of successful strategies used by solo and small group dental practice owners in a new competitive market including DSOs. Mixed methods includes attributes of both quantitative and qualitative methods (Saunders et al., 2015). McKim (2015) explained mixed methods researchers use statistics to compare with explanatory themes and designs. The mixed methodology is a complementary mix of quantitative and qualitative data analysis (Makrakis & Kostoulas-Makrakis, 2015). The mixed methodology was not selected, as the quantitative method was not used in this study.

Research Design

This doctoral study involved a case study design. The qualitative research method

consists of several designs. The most common qualitative designs are (a) narrative, (b) phenomenology, (c) ethnography, and (d) case study (Hyett et al., 2014). Yin (2018) explained that a descriptive case study is needed when the research purpose is to provide a full description of a phenomenon. Furthermore, researchers who use a case study design collect, analyze, and report study findings as a result of an in-depth understanding of a bounded system (Akers & Amos, 2017). Yin (2018) explained the use of multiple case study design adds validity and prevents generalization issues through triangulation. I chose a multiple case design to provide a deeper and more comprehensive understanding of the varied strategies being used by solo and small group dental practice owners use in a new competitive market including DSOs. A single-case study design for this study could lead to generalization of issues resulting in a lack of research validity.

A multiple case study design was selected to explore the strategies some solo and small group dental practice owners use in a new competitive market including DSOs. Moustakas (1994) identified a narrative design as a valid research method researchers can use in qualitative studies. Researchers use the narrative study design to explore the life of individuals and report on their experiences through the participants' personal stories (Hyett et al., 2014). Narrative research has proven successful in developing health communication methods and advances in treatment (Bhatia, Nadkarni, Murthy, Rao, & Crome, 2015). This research study was not intended to explore the dentist and their individual life experiences or stories. I explored the strategies used by successful solo and small group dental practice owners in a new competitive market including DSOs.

I did not choose a phenomenological design as I did not intend to explore the

meaning of participants lived experiences in this study. Researchers use phenomenological design to gather specific information from participants relative to their lived experiences and worldviews (Marshall & Rossman, 2016). Harrison (2014) reported researchers gather lived experiences from participants to explain phenomena. Peters and Halcomb (2015) described phenomenological design where researchers use interviews as the singular data collection source. I determined collecting data only through interviews would not provide the extent of data needed in this study.

Researchers use an ethnographic design to describe and interpret a culture-sharing group (Goulden et al., 2017). Researchers use ethnographic design to describe a phenomenon in the field of study based on the culture without considering moderating factors identified through empirical evidence (Marshall & Rossman, 2016). Marion, Eddleston, Friar, and Deeds, (2015) explained how researchers use ethnography to distinguish shared group cultural patterns and beliefs. Ethnography was not chosen for this research study as I did not focus on describing or interpreting dental groups' shared patterns of group culture.

Population and Sampling

As a researcher, I used open-ended interview questions with a purposeful sampling of five solo and small group dental practice owners in the central Kentucky region. Purposeful sampling aids the researcher in the participant selection process (Yin, 2018). Purposeful sampling in qualitative research enables researchers to collect evidence to correlate with the phenomenon, contextualize findings, and identify contributors with the knowledge necessary to contribute to the study (Palinkas, 2015). Purposeful sampling

also provides the researcher with the opportunity to develop and access a variety of assumptions (Duan, Bhaumik, Palinkas, & Hoagwood, 2015). In this study I purposefully selected study participants based on the participant's assumed knowledge of the research topic as each participant was, (a) a solo or small group dental practice owner, (b) actively practicing dentistry in central Kentucky, and (c) willing to share in-depth information relating to the research project.

Five solo or small group dental practice owners were interviewed to reach data saturation. Yin (2018) determined a sample size of two or three cases is adequate when conducting a qualitative multicase study. Data saturation is reached in qualitative research when no new concepts are identified, and further inquiry will not lead to new information (Noohi, Peyrovi, Goghary, & Kazemy, 2016). Data saturation is appropriate for qualitative research when using interviews as the primary source of data (Marshall & Rossman, 2016). The participants selected for this multiple case study were active solo or small group dental practice owners who were willing to answer open-ended questions as part of individual semistructured interviews.

Semistructured interviews were conducted using a defined interview protocol (see Appendix) with five solo or small group dental practice owners practicing dentistry in central Kentucky. Data saturation is appropriate for researchers who use interviews as the primary data source in qualitative research (Marshall, Cardon, Poddar, & Fontenot, 2013). Tran, Porcher, Ravaud, and Falissard (2016) reported data saturation is reached when no new themes or information emerge from the study participants. Researchers use methodological triangulation to increase validity through the integration of multiple data

sources to evaluate a phenomenon (Yin, 2018). This study used company data and information to gather further information as a means of methodological triangulation.

Ethical Research

To maintain acceptable and appropriate research standards and basic ethical principles, I used the guidelines outlined in the *Belmont Report* (U.S. Department of Health and Human Services, 2014). The Belmont Report (U.S. Department of Health and Human Services, 2014) further provides standards designed to prevent harm to participants, respect participant privacy and confidentiality and maintains the integrity of the scientific process (Babbie, 2016). It was my responsibility as the researcher to ensure the protection of participants from negative results and positive benefits resulting from their participation. Each participant was provided an informed consent form and reminded of my commitment to strict confidence. Researchers use informed consent as a means to alleviate bias (Yin, 2018). Greenwood (2016) identified informed consent as a necessary component of ethical research. Grady (2015) explained informed consent is a legal, ethical, and a regulatory acceptable research methodology. It is important for the researcher to receive informed consent before the research process begins (Yin, 2018). Barios (2018) emphasized the importance of researchers gaining informed consent when working with human participants. Informed consent was used as a prerequisite to involvement in this study. The informed consent form explained to the participants the purpose of the study and any potential risks, incentives, consequences, confidentiality measures, benefits that may exist, and obtained their agreement to participate.

Before starting the research, I applied for and received approval from the Walden University Institutional Review Board (IRB) and completed a National Institutes of Health (NIH) training certification of compliance. I explained that participation in this study is strictly voluntary without coercion. Participants knew of their ability to withdraw from participation in the study at any time without consequence. None of the participants withdrew from the study. I explained my role as the researcher, their role as a participant, and how I will protect the identity, anonymity, and confidentiality of their participation as delineated in the informed consent form.

Researchers can use financial incentives when conducting research. Giles et al. (2015) proffered ethical issues and concerns using financial incentives and associated unintended consequences. To prevent ethical concerns financial incentives were not offered for participation in this study. Participants understood that participation in this study was voluntary and there would be no negative consequences if they choose to not participate or withdraw from participation.

IRB approval was applied for and received from Walden University before commencing data collection for my research, as outlined by the Walden University Research Ethics and Compliance department guidelines relative to the University IRB. The Walden University IRB approval number for this research study is 08-05-19-0672702. This approval allowed me to conduct interviews with the research participants and collect internal documents and data. Confidentiality was maintained for all data collected as part of this research project. Participants and organizations were identified with a pseudonym, Participant 1, Participant 2, Participant 3, Participant 4, Participant 5

and provided a coded numerical identifier, P01, P02, P03, P04, P05 (see Appendix). All transcripts, electronic files, hard data, and audio recordings have had all personally identified information redacted and stored on password-protected devices. All data and documentation will be retained, conserved, and stored for five years in a locked, fireproof safe in my home where only I have access. To further protect participants, all documentation will be shredded and destroyed and all audio and flash drive memory deleted after five years.

Data Collection Instruments

I was the primary instrument for data collection in this study. There are four types of data collection methods for qualitative research, (a) interview, (b) observation, (c) collection, and (d) feeling (Yin, 2018). Using a number of different methods of data collection provides the researcher the ability to triangulate the data increasing the reliability and validity of the study (Houghton et al., 2013). The use of triangulation in a case study provides more accurate, neutral, and objective findings (Marshall & Rossman, 2016). Data validity was increased through data triangulation.

Semistructured, in-person interviews were used with open-ended questions. Researchers use semistructured interviews to provide flexibility as well as consistency in the interview and the insights and perspectives of participants (Jenkins, 2015). Semistructured interviews can be the empirical foundation of qualitative studies (McIntosh, & Morse, 2015). Marshall and Rossman (2016) explained an interview protocol provides increased reliability of the data collection process. The semistructured interviews were guided by an interview protocol (see Appendix) as I explored strategies

used by some solo and small group dental practice owners in a new competitive market including DSOs.

Reliability and validity of the data collection process was enhanced through member checking. Marshall and Rossman (2016) described member checking as a technique used by researchers to ensure the data collected during the interview is a correct representation of the participants expressed responses. Following the interviews, I synthesized the data and conducted member checking with the participants. The member checking protocol outlined in the Appendix, allowed me to verify the data derived from the interviews was a correct representation of the participants intended response.

Data Collection Techniques

I used open-ended interview questions and follow up probing questions to identify strategies some solo and small group dental practice owners are using to adapt their business to be successful in a new competitive market including DSOs. Wahyuni (2012) identified the potential disadvantage of semistructured interviews as the interviewer could guide the direction of the interview inappropriately. Researchers use open-ended interview questions to allow participants to openly and freely express their perspective on the phenomenon (McIntosh, & Morse, 2015). Semistructured interviews provide flexibility in the interview process for the researcher to ask probing follow-up questions (Caretta, 2015).. Denzin (2012) suggested the use of multiple methods of data collection to attain a broader understanding of the research topic. The data collection process also included the collection of participant company documents for review and analysis. These

documents included marketing and advertising strategies as well as website and social media marketing methods.

Participants were provided an informed consent form, and I used a field log during the interview. I also electronically recorded the audio of the interview and transcribed the results following the interview. I used member checking to verify that I captured what the interview participants intended to express. Member checking is a technique used by researchers to ensure the data collected during the interview is a correct representation of the participants expressed responses (Marshall & Rossman, 2016). Member checking can also be used to allow follow up questions for further expansion and elaboration on participant responses and provides the researcher with the ability to confirm and clarify data collected from participants (Caretta, 2015). Forber-Pratt (2015) determined the use of member checking supported improved legitimacy, reliability, and validity in qualitative research studies.

Data Organization Technique

The interview protocol outlined in the Appendix was followed to maintain consistency of data collection and organization. Data organization is critical relative to research reliability and validity (Yin, 2018). In addition to capturing the interview through an electronic audio recording, I transcribe the interviews into Microsoft word and used the NVivo software to organize the data. NVivo is a qualitative data analysis (QDA) software used to assist researchers in qualitative study data analysis (Edwards-Jones, 2014). Each participant interviewed was assigned a sequential coding system to protect the identity of the participants. The coding system used a pseudonym, Participant 1,

Participant 2, Participant 3, Participant 4, Participant 5 and provided a coded numerical identifier, P01, P02, P03, P04, P05. All data associated with the interviews and the participants will be saved in a secure file where only I have access. All collected data, materials, and records will be secured for five years in my fireproof safe where only I have access, which I will destroy five years after the approval of this study.

Data Analysis

A disciplined and comprehensive data analysis process was used. Data analysis in qualitative research is a comprehensive process of data reduction, organization, and interpretation by the researcher (Neal, Neal, BanDyke, & Kornbluh, 2015). Data analysis provides the researcher with the opportunity to interpret data, generate descriptions, explanations, categories and types (Keenan, van Teijlingen, & Pitchforth, 2015). I captured raw data for analysis and interpretation using a defined interview protocol (see Appendix) and semistructured, open-ended interview questions. A five-step process for data analysis was used where I, (a) compiled the data, (b) disassembled the data, (c) developed themes in the data, (d) interpreted the data, (e) drew conclusions from the data as outlined by Yin (2018).

A coding system using pseudonym to confidentially identify the participants and transfer the data into NVivo for data analysis and theme identification was used. The NVivo software helped me as the researcher to organize the data collected from interview transcripts, field notes, and company and organizational information collected. Collection of data from semistructured interviews, field notes and company documentation, provided me with a method of triangulation in the research project. Through

methodological triangulation, researchers triangulate research results by gathering data and information through more than one process (Kotus & Rzeszewski, 2015). As a researcher, my responsibility was to discover themes and patterns relative to the central research question of this proposed study. After the data was in the NVivo software, I began developing themes, interpreting the data and drew conclusions relative to strategies used by solo and small group dental practice owners to compete in a market including DSOs. Throughout the research process and data analysis, I correlated themes developed in the data analysis, identified through the literature review findings and the general systems theory.

Reliability and Validity

Qualitative case study research quality and trustworthiness are dependent on reliability and validity. Researchers in qualitative case study strengthen accuracy and quality through the use of reliability and validity (Yin, 2018). Foley and O'Connor (2013) stated how reliability and validity in research are strengthened through a semistructured interview process. Triangulation deploys the use of multiple types of data to confirm discoveries in qualitative research to increase reliability and validity (Yin, 2018). Quality in quantitative research is evaluated base on four criteria: (a) credibility, (b) dependability, (c) confirmability, (d) transferability (Wahyuni, 2012). Qualitative researchers support credible, dependable, confirmable and transferable research results as part of trustworthy qualitative research (Anney, 2014).

Reliability

Reliability in quantitative research is synonymous with dependability. Yin (2018) explains dependability is the result of research using consistent and repetitive processes. Cairney and St Denny (2015) described dependable qualitative research comes from consistent structure, a coding system for data analysis, and theoretical contributions. Researchers increase dependability in qualitative research by providing details on research design and procedures researchers can use in future research studies (Wahyuni, 2012). Yin (2018) explained study reliability is attained when subsequent researchers reach the same results within the same research conditions. I used a rigorous and consistent research process to increase the reliability and dependability of this study. As the researcher, I increased dependability in this study through member checking and methodological triangulation.

Validity

Validity in qualitative research is indicated by a study containing credibility, transferability, and confirmability. Concerning credibility, Wahyuni (2012) explained credibility depends on data accuracy in qualitative research. Sarma (2015) encouraged the use of defined and accepted data collection procedures as a method for increased research credibility. Qu and Dumay (2011) explained how researchers establish credibility by using methodological triangulation. Transferability is a common measure of reliability and validity in qualitative research (Elo, Kääriäinen, Kanste, Pölkki, Utriainen, & Kyngäs, 2014). Transferability is achieved through the ability of researchers to transfer the data to future studies (Houghton et, al., 2013). Anney (2014) explained transferability

depends on researcher prudence and judgment. Confirmability in qualitative research has the goal of characterizing the study with a truthful and accurate presentation of collected research data (Morse, 2015). Member checking is a tool researchers can use to promote confirmability in research (Petty, Thomson, & Stew, 2012). Yin (2018) explained researchers use triangulation to assist in confirmation of findings.

To provide validity in this study, I provided detailed descriptions of the participant's context, population, interview method and protocol, and the steps taken during the research process. I also used member checking to verify the accuracy of the interview transcripts and the intended response by the participants. Finally, I used methodological triangulation to validate and confirm discoveries and findings.

Transition and Summary

The purpose of this qualitative study is to explore the strategies used by single and solo dental practitioners to compete in a dynamic market including DSOs. Semistructured interview questions were used with appropriate participants from central Kentucky. Section 2 explained my role as the researcher and how and why a method and design was selected. Furthermore, section 2 provided rational for population and sampling, a discussion on ethical research, an outline of data collection, organization, and data analysis techniques. Section 2 finished with the reliability and validity techniques used in this study. Section 3 provides the results of the research and the associated analysis, conclusions and potential areas of future research. Section 3 concludes with thoughts and reflections on my efforts associated with the completed study.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of this qualitative multiple case study was to explore the strategies some solo and small group dental practice owners use in a new competitive market including DSOs. The study population was five solo or small group practice doctor owners in central Kentucky who demonstrated success in developing and leveraging strategies designed to compete with DSOs. The study included methodological triangulation of semistructured interviews and practice data and information provided by the study participants. As previously defined, the GST was the conceptual framework for this study. In this section, I present the findings of semistructured interviews and data gathered from participants. Three main themes emerged from the process: (a) patient care and experience, (b) patient and community relationships, and (c) adaptation and innovation.

Presentation of the Findings

The research question for this qualitative multiple case study was: What strategies do successful solo and small group dental practice owners use to adapt their businesses to be successful in a new competitive market including DSOs? Open-ended semistructured interview questions were asked in support of the principle research question. Additional interview questions were used as part of the interview process to gain further understanding and clarity in terms of participants' responses. I identified three primary themes. Contributing to the data analysis is practice information gathered regrading study participants to triangulate interview data. Researchers use methodological triangulation to

increase validity of study findings through the integration of multiple data sources to evaluate a phenomenon (Yin, 2018). The primary themes identified were patient care and experience, patient and community relationships, and adaptation and innovation.

Participants and their practices. The participants in this study were solo and small group dental practice owners and active practitioners in central Kentucky. I completed semistructured interviews with two solo practitioners and three small group dental practitioners. The two solo practitioners had owned their practices between 12 and 15 years. One of the small group practitioners had been an owner partner in a practice for just under 7 years and the other small group practitioner had been owner partners for over 20 years. All five participants were general practitioners and their practices had proven success. Contact with these participants was made through friends and colleagues who made personal introductions. Once introduced, I contacted potential participants with a phone message outlining the interview protocol (see Appendix) and followed up with an email containing the informed consent form. All participants were willing to participate in this study and openly shared in-depth information relative to the research project as part of semistructured interviews.

Emergent Theme 1: Patient Care and Experience

The first major theme to emerge was the importance of exceptional patient care and creating a great patient experience. All five of the participants started with patient care and experience as the foremost priority of their practice. Theme 1 includes three minor themes (see Table 1): taking the necessary time to care for patients, being motivated by patient need rather than volume or production, and warm and welcoming

environments. Each of these minor themes related to and supported the major theme of patient care and experience.

Taking necessary time to care for the patients. All five of the participants stressed the importance of taking the necessary time to care for patients. P01 (August 2019) stated, “I take a lot of time to give the needed attention to each patient. I have one gear when I work, I want to do it right.” P02 (August 2019) shared, “I take plenty of time to get to know my patients, take care of them as individuals and members of their family. Then I build on that.” P03 (August 2019) said, “The experience my patients have is what drives the practice.” P04 (August 2019) said, “I take the time to pay attention to details that matter to the patient. I see them as individuals.” P05 (August 2019) stated, “We take the time and the extra step to get to know you as a person and your specific needs.” These responses by participants all indicate an understanding of how important it is to take as much time as possible when caring for patients as individuals. This approach mitigates the potential for patients to feel like the doctor, and practice is focused on volume and productivity. Placing importance on taking the necessary time to care for patients is a part of the primary theme emphasizing patient care and experience.

Motivation according to patient needs rather than volume or production. All five of the participants shared they were motivated to make the needs of the patient primary. For these participants, this primary motivation superseded any consideration for patient volume, throughput, production, or financial goals. P01 said, “It hurts us all when our motivation is off or misplaced”. P01 also said, “I think one thing that probably gets me a lot of patients is that I care and I think they can see that”. P02 reinforced this by

explaining how he works to get to know the patients on a personal basis. P05 further explained the importance of getting to know the patient in order to better serve their specific needs. Emphasis on patient needs was evident in participants' responses and practice materials. Similar to the minor theme of taking the necessary time to care for the patient, the motivation to care for the needs of the patient mitigates the potential for patients feeling the doctor and staff are focused on production and volume. Focused attention on patient needs is an important and integral component of the central strategy of providing exceptional patient care and creating a great experience.

Warm and welcoming environment. 4 of five participants explained their emphasis on a warm and welcoming environment in their practice. P03 shared a desire to serve the needs of patients, their parents, their children, and their friends. P02 expressed a desire to create a fun family environment where people enjoyed themselves rather than one that is highly sterile and clinical. This minor theme also mitigates against the potential of making patients feel like the doctor and staff are motivated by productivity and volume. A dental office can feel clinical, sterile, and in some ways threatening, but these participants have strategically chosen to mitigate this by creating an environment that is warm and welcoming. A warm and welcoming environment is central to the overall strategy of providing exceptional patient care and experience.

Table 1

Patient Care and Experience

Strategy	Number of participants deploying strategy	Total percentage
Taking the necessary time to care for the patients	5	100%

Motivation according to patient needs rather than volume or production	5	100%
Warm and welcoming environment	4	80%

Theme 1 is consistent with the GST as von Bertalanffy illustrated the systems theory by sharing the example of how modern biology asserts the necessity of studying both the individual parts of an organism in isolation but also in relation and interaction with the whole organism. Businesses function as integrated sets of subsystems with each unit, department, or function working together to accomplish the goals of the organization. Each of the participants emphasized that departments and functions within their practice must be primarily motivated by providing excellent patient care and meeting the needs of each patient.

The emergent theme of patient care and experience and associated subthemes confirm the literature found in my research where the solo or small group dental practice owner is responsible for providing the necessary clinical care to their patients. The dentist serves the primary role of providing clinical care to patients while providing leadership to the dental team (Solomon, 2012). Leading the business aspects of the practice while providing quality care to their patients is a challenge for dentists. Each of the participants in this study have specifically chosen to serve the needs of the patient as their principle approach and strategy. The emphasis on patient care and experience was further confirmed by a review of the practice literature and digital expression. All five practitioners clearly stated their desire to take the necessary time to properly and effectively meet the specific needs of their patients.

The clarity of patient care and experience as the foremost priority of their practice was consistent with the findings in my literature review. Moeller and Valentinov (2012) explained how people perform more effectively when the business leader considers the interaction of the people within the business system to provide their people with an understanding of the goals and objectives of the business as a whole. The participants in this study linked business success and the effective functioning of the people within the system by clearly identifying the goal and objective of exceptional patient care and experience.

Emergent Theme 2: Patient and Community Relationships

The second theme to emerge was the development of relationships with their patients and relationships in their community. Each of the participants indicated the importance of developing a relationship with their patients as a fundamental marketing and advertising approach. Similarly, developing relationships and being known as an active member of the community was also an important part of the marketing and advertising approach. Three minor themes were identified as part of the patient care and relationships theme (see Table 2): word of mouth is the primary means of patient acquisition, being an active member of the community, and does not view other dentists as competitors. Each of these minor themes contribute to the primary theme of developing relationships with patients and in the community.

Word of mouth as the primary means of patient acquisition. All 5 participants indicated that traditional print advertising is no longer useful and a shift to a strong reliance on personal referrals by patients and word of mouth as a strategy for patient

acquisition. P01 shared, “Back when I first started, it just seemed like if you were willing to purchase a full page add in the phone book yellow pages it would pay dividends. Where as now it’s Internet based, it’s clicks, it’s Google”. P02 also shared, “I don’t want to just get to know them, I want to care for their family and their kids and their parents”. P03 indicated a shift away from direct mail and traditional advertising and to an emphasis on developing strong relationships with patients who promote the practice through word of mouth recommendations. The participants in this study recognized the need to shift away from traditional advertising to a strategy focused on the creation of personal relationships with their patients in order to gain patients through word of mouth. Each of the participants in this study have successfully shifted away from traditional advertising and have gone to an approach more focused on word of mouth for patient acquisition.

Being an active member of the community. Two of the five participants shared the importance of being an active member in the community. This theme was evidenced in the response of P01 who shared, “I think a lot of the people here, want to go to local people. Over the years I’ve been integrated into the system by participating in some of the local activities. If I go to anything local, everyone seems to recognize me”. P02 shared how sponsorships of sports teams and leagues was a way for him to be known as an active member of the community. These participants have recognized the need for building and maintaining relationships in the communities they serve. Given a reduction in traditional advertising, the subtheme of being an active member of the community indicates a strategic link to the theme where these participants intentionally develop

patient and community relationships as a strategy to successfully maintain competitiveness.

Not viewing other dentists as competitors. Eighty percent of the participants indicated how they do not view other dentists who are practice owners as competitors. P01 shared, It doesn't seem ultra competitive because I think a lot of the people here, want to go to local people. P02 stated, "as far as I know, everybody stays plenty busy. I don't feel it is a competition if that makes sense. If I need to borrow something, I call. Everybody works together". P03 said, "never felt it as a competition, more collegial". P04 indicated, "It's not a competition or a win or loose situation". These responses by the participants indicate how dentists maintain relationships with other dentists in their community with a general view that other dental practice owners are colleagues in their industry rather than competitors. It should be noted that the participants did not share this same attitude in relation to DSO led practices in their market. Maintaining relationships with other dental practice owners and practitioners is a way the participants in this study maintain relationships in their community as a strategy to successfully maintain competitiveness.

Table 2

Patient and Community Relationships

Strategy	Number of participants deploying strategy	Total percentage
Word of mouth as the primary means of patient acquisition	5	100%
Being an active member of the community	2	40%
Not viewing other dentists as competitors	4	80%

Marketing and advertising is a critical and important part of a successful business system, Theme 2 relates to GST as von Bertalanffy (1972) viewed the world and business systems as a whole when attempting to solve complex problems because systems have interactions, interdependencies and synergies with the individual parts of the system. Systems theory can provide a foundational construct to explain a phenomena and trends in a real world system (Whitney, Bradley, Baugh, Chesterman, 2015). Theme 2 presented a phenomenon where the intentional development of patient and community relationships strategically leads to successfully maintaining competitiveness for the dental practice owner as the primary approach to marketing and advertising.

The emergent theme of patient and community relationships and the associated sub themes confirm the literature found in my research. Competitive pressures are increasing for dentists. An increasing supply of graduating dentists and an increasing retirement age for dentists has impacted the general concept of supply and demand for dental practitioners (Munson & Vujicic, 2015). The attention to patient and community relationships as a strategic approach to maintaining and growing patients directly relates to an understanding of the competitive pressures they are facing in their markets.

The shift from a simplistic approach in traditional advertising to the complexity of marketing and advertising through the Internet and social media is confirmed in my literature review. My literature review identified a shift to consumer dental care-seeking behavior. The participant's shift from traditional advertising to a strategy where personal relationships are leveraged through word of mouth that often includes social media is

consistent with this consumer-oriented shift. The recognition that traditional advertising has shifted to the Internet and social media is also consistent with the findings in my literature review.

The subtheme of other dentists not viewed as competitors is inconsistent with the finding of my literature review. Four out of five of the participants specifically stated that they did not view other dentists as competitors. As I probed this response with follow up questions, the participants considered other dentists and other solo or small group practice owners, as colleagues. Conversely, the participants viewed DSO led practices as competitors and not the same as “other dentists”. The participants perspective could be the result of a relatively low percentage of market share currently existing in the markets where these participants practice. My literature review identified a total of 8.3% of dentists are affiliated with DSOs. Ford (2018) estimated over 16% of dental practices are DSO led. Ford (2018) estimated DSOs are growing by as much as 15% annually. Some researchers predict that a majority of dentistry will be practiced as part of a group by 2025 even though the total market share for DSO led practices is relatively (Cole et al., 2015). All five of the participants were fully aware of the DSO growth projections and viewed this trend as a competitive concern.

Emergent Theme 3: Adaptation and Innovation

The final major theme to emerge was adaption and innovation, all of the participants recognized the need to adapt and innovate to remain competitive. Three minor themes were identified as part of the adaption and innovation theme (see Table 3): keep up with latest technology, emphasize the use of the latest technology, and keep up

with latest treatment techniques. Each of these minor themes support emerging theme 3 indicating a need to strategically adapt and innovate in order to remain competitive in the dental marketplace.

Keeping up with the latest technology. All five of the participants viewed keeping up with the latest technology as a strategic distinctive. P01 shared, “Something that patients notice in our office and comment on, we have the latest technology, we went to digital x-rays and lasers years ago. I’m one of those, I don’t want to be first in the water, but I don’t want to be last.” P03 said, “I stay on top of things so I can do most anything a patient might need. The materials we use has changed a lot over the years. P04 shared, “We have a comprehensive offering. I think our patients appreciate that we have the latest technology available”. The participants in this study each recognized the need to remain current and relevant by keeping up with technological advancements. Based on the responses and a review of practice literature, maintaining the latest technology seems to be an industry norm to remain competitive. Each of these responses indicate an intentional approach to keeping up with the latest technology as a part of the main theme of adaption and innovation.

Emphasizing the latest technology with patients. Sixty percent of the participants made it a point to emphasize the use of the latest technologies. This emphasis was confirmed in my review of the data and information gathered on the participating practices. When asked about their use of technology, P01 stated, “We tell them about it. Sometimes even if I’m not using it I mention it. Not to boast about it, but just to say we are keeping up”. P05 also shared, “We put a lot of emphasis on our highly accredited

doctors and being on the front end of technology and techniques”. P02 stated, “I do a lot of implant work, tough cases. My website gives patients an idea of what we can do, it shows I can pretty much do anything a patient might need done”. The participant responses indicate the need to educate their patients on the use of the latest technology as a strategy for success. The participants felt it was important to not only use the latest technology but also make sure the patients were aware of how the latest technology was being deployed. These responses and a review of the practice marketing materials and website content confirm the minor theme where the participants emphasize the use of the latest technology with patients to strategically position their practice for success in a competitive market.

Keeping up with the latest treatment techniques. One hundred percent of the participants have been diligent to add the latest treatment techniques as a part of their offerings. P01 shared, “I would say I think one of the main things that helps me the most is just kind of do everything. I do, root canals, I place implants, do bone graphs, and other complex restorations. Also, I try to keep up with everything, I take the stuff home and read it for pleasure. I take it on vacation”. P03 shared how the practice emphasizes a comprehensive offering of services. The comprehensive offering was verified in a review of the practice website where over 20 different services and technologies were highlighted with detailed descriptions. A review of the other participant websites reveals an emphasis on providing a comprehensive list of treatment services using the latest technology. Similar to the previous minor themes, this minor theme of keeping up with

the latest treatment techniques is clearly a strategic approach for the participants to adapt and innovate as a practice to remain competitive.

Table 3

Adaptation and Innovation

Strategy	Number of participants deploying strategy	Total percentage
Keeping up with the latest technology	5	100%
Emphasizing the latest technology with patients	3	60%
Keeping up with the latest treatment techniques	5	100%

The participants in this study revealed the importance of adapting and innovating their practice and systems in order to remain competitive. Systems thinking has allowed individual medical practices to adapt to local competitive and environmental conditions uniquely. Von Bertalanffy (1972) outlines in GST how organizations change and adapt in response to stimuli from their external environments. By keeping up with the latest technology, emphasizing the use of technology and keeping up with the latest treatment techniques to provide a comprehensive offering, the participants in this study have demonstrated the need to strategically adapt and innovate to remain competitive.

The emergent theme of adaptation and innovation and the associated sub themes are consistent with the literature found in my research. Taichman et al. (2014) pointed to increased regulation, rapid technological change, increased competitive pressures, unpredictable economic conditions, uncertain dental benefit coverages, and process innovation as causing many dental practitioners to struggle to keep pace with the

changing environment. The adaptations and innovations shown by the dental participants is consistent with the findings in my review of the literature.

Themes from the literature review that were not specifically identified as part of my research include:

- Improved oral health due to the fluoridation era – the participants did not identify improved oral health as a specific dynamic they are dealing with. I asked one participant about this topic specifically and he indicated that the market he serves has a significant level of tobacco use and went through a very troubling period of dental health deterioration caused by the methamphetamine epidemic in this region. He assumed the negative factors largely overshadowed any improvements in oral health created from the fluoridation era.
- The participants in my research largely did not participate in public health insurance programs and therefore did not comment on the affects of the Affordable Care Act.
- The reality of increasing student loan debt for graduating dentists was not mentioned. The participants in my study are all mid-career and have not considered the process of transitioning their practice to a newly graduated partner.
- Managing increasing practice overhead rates was also an area that was not specifically mentioned. Each of the participants are successful dental practice owners with strategies to make them successful in a competitive environment including DSOs. The success of these strategies seem to supersede any negative impact caused by increasing cost of operations.

Applications to Professional Practice

The findings in this study identify strategies solo and small group dental practice owners use to adapt their business to be successful in a new competitive market including DSOs. Dentistry is a small business model where over 84% of all dentists are owners of their practices with more than half of all practices led by solo practitioners (Garcia, 2014). The dental industry is experiencing increased regulations, rapid technological changes, increased competitive pressures, unpredictable economic conditions, uncertain dental benefit coverages, and process innovations resulting in many dental practitioners struggling to keep pace with the changing environment (Taichman, Taichman, Inglehart, & Habil, 2014). A significant indication of change is the increased competition from large multi-site dental groups and DSOs. Langelier et al. (2017) identified a 54% increase in the number of dental firms with 50 or more employees and the number of dental locations operated by large firms more than doubled over 10 years. The growth of large dental firms and DSO competition is expected to continue as Cole et al. (2015) predicted a majority of dentistry will practice as part of a group by 2025. Adapting systems, processes, and strategies that are based on new conditions and a changing competitive environment can potentially lead to increased business sustainability, viability, and competitiveness. Other solo and small group dental practice owners can use the findings of this study to adapt and adjust current strategies to be successful in a new competitive market including DSOs.

In my semi-structured interviews with solo and small group dental practice owners, I identified three themes relative to strategies used to adapt their business to be

successful in a new competitive market including DSOs. The identified themes are: patient care and experience, patient and community relationships, and adaptation and innovation. I used the GST to guide this study. All of the themes identified in the interviews and in the practice data aligned with the general systems theory and provide evidence of how organizations change and adapt in response to stimuli from external environments. All of the participants were active doctor owners. Other solo or small group practice owners can apply the findings identified in this study to implement strategies to be successful in a new competitive environment including DSOs.

Implications for Social Change

The results of this study may contribute to positive social change by helping solo and small group dental practitioners develop and implement strategies needed to be successful in a new competitive environment including DSOs. Dye (2017) reports oral health disorders and the associated socioeconomic impact to the population makes dental care an important global public health issue. Applying effective strategies identified in this study may enable the solo and small group dental practice owner to provide sustainable dental services to the community. Successful Solo and small group dental practice owners provide important dental care needs to individuals in the communities they serve. A second implication for positive social change may result from the economic benefit to the community. As a small business in the community, successful solo and small group dental practitioners employ the dentist and clinical staff, provide commerce to suppliers and business service providers, and tax contributions to the city, state, and U.S. federal government.

Recommendations for Action

The purpose of this qualitative multiple case study was to explore the strategies some solo and small group dental practice owners use in a new competitive market including DSOs. The emerged themes from participant interviews and organizational documentation determined that solo and small group dental practitioners should actively develop and implement strategies to compete in an increasingly competitive environment. The overarching recommendation is for solo and small group dental practice owners recognize that the dental industry is changing dramatically. This change should be recognized, embraced and addressed strategically. This study identifies several strategies that have proven successful for solo and small group practice owners in central Kentucky. Application of the strategies identified in this study could help other practice owners implement strategies that would lead to ongoing success and sustainability in their practice.

The first specific recommendation is for dental practice owners to focus on patient care and providing an excellent patient experience. The participants in this study have successfully focused on the needs of the patient rather than being distracted by patient volume and productivity. The participant's focus on taking the needed time for each patient has resulted in a positive patient experience. The creation of a warm, friendly and family environment has been a strategic emphasis for the doctor owners and their staff.

The second specific recommendation is for dental practice owners to focus on building relationships with their patients and in the communities they serve. The participants in this study attribute their success partly to their intentional development of

relationships with their patients and in the communities they serve. The shift from traditional print media advertising to the Internet and social media makes it critically important to create relationships where patients use word of mouth and social media to drive referrals to the practice. The participants also indicated the importance of being known as an active member of the community by participating in community activities and events.

The final recommendation is for dental practice owners to actively adapt and innovate in order to stay current on the latest developments in treatment techniques and technologies. The participants in this study recognized the importance of keeping up with the latest technology and helping patients and potential patients know about the use of technology in the practice. The participants also emphasized the strategy of keeping up with the latest treatment techniques in order to serve the needs and desires of the consumer oriented patients they see.

Recommendations for Further Research

The themes gathered from this study provide beneficial strategies solo and small group dental practitioners may use to improve competitiveness in dynamic market conditions. I used a qualitative multiple case study method and von Bertalanffy' GST. This study included five dental participants in central Kentucky. Considering that, one limitation of this study was the degree of competitive pressure from DSOs, recognized by solo and small practitioners in central Kentucky, I recommend future researchers select a different geography and sample size to verify the findings are replicable in other regions or markets. A researcher could use a quantitative study to measure the relationship of the

number of solo and small group dental practitioners and DSO market share in a given region. I also recommend a future researcher explore strategies used by DSOs to improve competitiveness in dynamic market conditions. Finally, I would recommend future researchers incorporate a conceptual framework different than the GST. Potential conceptual frameworks future researchers could use are, strategic management theory, CAS theory, and Lewin's and Kotter's change management model.

Reflections

My interest in the dental industry stems from my stepfather who started the University of Kentucky Dental School in 1962. My stepfather's passing brought me back to Kentucky to care for aging parents and I began working in a large group orthodontic and pediatric dental practice serving the operational needs of 47 offices. I started the Walden University doctoral program close to the same time as starting my new career in the dental industry. I spent the majority of my career in the aerospace industry and the dental industry was a significant departure. Not having experience in dentistry and seeing how the dental industry was experience a disruption caused by DSOs, I decided to make dentistry the subject of my study. Making dentistry the focus of my study allowed me to intensely research and learn about the dental industry and the dynamics caused by the growth of DSOs. The Walden DBA experience also allowed me to understand the doctoral research process and the necessary tools and education to become an independent scholar.

As a member of the dental industry and a part of a large group practice, I avoided adding bias to the interviews conducted with solo and small group dental practice owners

by following a strict interview protocol (see Appendix). Each interview was conducted using the same questions asked in the same order. Interviews were followed by member checking to assure the interview correctly capture the participants intentions. Interview participants were also part of the dental industry not involved in orthodontics, the dental specialty I am working in. The findings in this study provided me a new understanding of strategies solo and small group dental practice owners use to compete in a new competitive market including DSOs. The findings of this study could help dental practice owners implement strategies that would increase practice competitiveness, sustainability and leverage the power and passion of doctor ownership.

Conclusion

Dental health is an important and integral part of overall health. Successful solo and small group dental practice owners serve a significant majority of dental patient care and treatment nationally. Dynamics in the dental industry are predicted to shift the practice ownership model to a predominance of DSOs. Application of the recommendations from this study could help solo and small group dental practice owners be successful in this competitive market including DSOs.

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Appendix: Interview Protocol

The following is the process I will use as I interview solo and small group dental practitioners as I research the strategies used in a new competitive market including DSOs.

The following steps will be followed:

1. I will schedule the interview at a time and place convenient and comfortable for the interviewee.
2. At the beginning of the interview I will thank the participant for agreeing to participate in this interview and for their contribution to the study.
3. I will then provide a brief overview of the research, the purpose, and the expected time required for the interview.
4. I will provide the participant with a copy of the informed consent form and review the contents of the informed consent form. The informed consent form will include: (a) the expected length of time for the interview, (b) an explanation of how the interview will be audio recorded and if the participant does not want the interview recorded, then how I will take hand written notes, and (c) the plan to present a summary of the interview in order to validate my interpretation of their responses to each question.
5. I will reiterate to each participant their participation is voluntary and participants can withdraw from the study at any time through email or personal contact.

6. I will explain to the participants my plan to use a sequential coding system to identify each participant rather than their name as a means to protect their identity.
7. I will turn on the recording devices.
8. I will note the date and time and introduce the participant with a pseudonym (Participant 1; Participant 2; Participant 3; Participant 4; Participant 5) and coded numerical identifier (P01; P02; P03; P04; P05).
9. I will begin the interview by reading the central research question:
   What strategies do successful solo and small group dental practice owners use to adapt their business to be successful in a new competitive market including DSOs?
10. I will next ask the following open ended questions along with the potential for follow up probing questions that may help expand on the participant's responses:
    a. What strategies have you used to improve your competitiveness in your market?
    b. How have you assessed the effectiveness of your strategies?
    c. What were the key barriers to implementing successful strategies you have used to increase competitiveness in your market?
    d. How did you address the key barriers to implementing the strategies for improved competitiveness in the marketplace?
    e. What additional information would you like to add that was not asked with the previous questions?

11. After completing the interview questions, I will ask each participant for any further questions regarding the interview.
12. I will then end the recording noting the time and date.
13. I will remind the participant of my plan to follow up with the participants to present a summary of the interview in order to validate my interpretation of the responses provided to each question.
14. I will thank the participant for their time and for participating in this interview.