Women's Perspectives on Their Own Interest and Career Development in Male-dominated Dental Specialties

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WOMEN’S PERSPECTIVES ON THEIR OWN INTEREST AND CAREER DEVELOPMENT IN MALE-DOMINATED DENTAL SPECIALTIES

By

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A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

Major: Educational Psychology and Research

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Dedication

This work is dedicated to my amazing family.

To Atticus and Calliope, you can do hard things.
Acknowledgements

This dissertation does not just belong to me, it belongs to my amazing support system of people that have been with me every step of the way. First, to my mom Leisa and brother Aaron this would not have been possible without you. We may be a tiny family, but we are mighty. I love you both with all my heart. To my nephew Atticus and niece Calliope, while you were not here yet when I began this journey, you inspired me to keep pushing on when things were hard through your joy and love of life. Rah Rah loves you.

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Abstract

Dentistry has traditionally been a male-dominated profession. However, the past decade has seen a steady improvement in gender equality in dental schools around the United States. For the first time in 2018, the entering class in dental schools had more women enrolled than men. While women have achieved equality in receiving undergraduate dental education, they remain significantly underrepresented in advanced training of three dental specialties including endodontics, oral surgery, and periodontics. The purpose of this case study is to explore why women remain underrepresented in these specialties of the dental field by learning from six women’s personal experiences to understand their reasons for becoming interested in and ultimately choosing a male dominated dental specialty.

This case study was guided by a dual framework consisting of a feminist approach to conducting research and Social Cognitive Career Theory (SCCT) which seeks to explain three interrelated aspects of career development: (1) how career interests are formed, (2) how career choices are made, and (3) how career success in a chosen field is obtained.

Data collection was accomplished through interviews, prompted participant journaling, and regular researcher journaling. Thematic analysis was used to identify commonalities across the data through initial, in vivo, and structural coding. Three themes were identified: (1) interest to specialize was cultivated through learning experiences, (2) residency is not conducive to family life for women residents, and (3) having a strong support system led to success. These findings suggest that it is important for women to be exposed to numerous dental specialties early in their undergraduate programs and throughout dental school, that there should be supportive maternity leave policies in place for women in
residency, and that women mentors in various specialties should be available to be observed
and consulted by women who are interested in a male-dominated dental specialty.

*Keywords*: dental specialties, feminism, Social Cognitive Career Theory, residency
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Chapter 1: Introduction

As women achieve power, the barriers will fall. As society sees what women can do, as women see what women can do, there will be more women out there doing things, and we’ll all be better off for it.


Growing up in the Mid-South has provided me with a unique understanding of gender norms and expectations. In my own home, traditional gender norms were common, however, this wasn’t always the case. My mom was the “breadwinner” of our family as she had sought a career in a traditionally male dominated field. As she progressed in her professional endeavors, she became a manager at a major hospital in information systems and over the years I noticed more women being hired into her department. Growing up, witnessing my mother’s success and how the demographics in her career were shifting, I questioned why women are looked upon as being better suited for certain professions.

As I have learned and grown throughout my doctoral program, I have been inspired to learn about women, like my mother, who have made great strides in achieving positions of power and influence and how other women have followed these examples. I have also experienced disappointment realizing that some aspects of our society have yet to achieve equity for women who are trying to enter male-dominated spaces, including within dentistry.

I began my journey to become a dental hygienist in 2008 and was totally unaware of many aspects of dentistry, including the gender statistics within the profession. I did not know that in 2009, the school I was then attending had only 33.8% women enrolled in their first year of the Doctor of Dental Surgery program even though they made up 47.4% of applicants (González et al., 2011). I also did not know that it would not be until 2020 that
women finally made up the majority of first-time enrollees at this same institution with 54.1% identifying as female (ADEA, 2020).

I also did not realize that when I began working as a licensed professional in private practice, that I would work for many middle-aged male dentists and that finding a female dentist to work for was like finding a unicorn. As I have progressed in this profession and shifted into education as a clinical instructor, I have been afforded the opportunity to watch many students grow and prosper in their professional lives and have been pleased to see many gender disparities diminishing as dentistry has become a more equitable profession for women. I have even noticed an increase in the number of males entering the dental hygiene field. However, one avenue that I have not seen reach gender equality in the profession of dentistry is in some advanced dental specialty training programs.

This inequity became clear to me when one of my students became the first ever woman to enroll in a longstanding oral surgery residency program. Realizing that her achievement was important for women in the dental field, I began a search for demographic information on oral surgery residents across the country and was shocked by what I discovered. At the time of her acceptance into the program only 16% of all oral surgery enrollees were women (American Association of Oral and Maxillofacial Surgeons, 2019). This information made me curious to learn if other dental specialties remained male-dominated even though, for the first time, women made up the majority of dental school enrollees across the country (American Dental Education Association, 2019). I found that endodontics and periodontics, along with oral surgery, were the three major dental specialties that were still inequitable in regard to the number of women enrollees with 43.8%, 47%, and 20.3%, respectively (American Dental Association Health Policy Institute, 2022).
As I reflect over the years, I have also noticed the vast majority of the dental students I teach who choose to specialize have been men. This led me to ask, “why?” Why are more of my male students driven to further their education in certain specialties? Why is it that many of the female students that do choose to continue to a residency typically gravitate towards specialties that have greater numbers of women? Why did one woman dare to enter into an oral surgery program that has only had male residents?

These questions have led me to become interested in exploring why certain women become interested in and ultimately choose these particular dental specialties. It is my hope that the information obtained from my exploration can provide insights on changes that can be made to attract more women into these male-dominated spaces, creating more equity within the profession and workforce.

**Research Orientation**

To explore the question above, I conducted a case study using a feminist approach to build knowledge from the perspectives and experiences of women. This case study was viewed through the lens of Social Cognitive Career Theory (SCCT; Lent et al., 1994).

I chose to approach this study through a feminist lens as I consider myself a feminist and budding feminist researcher. I recognize that feminism comes in many forms and for the purposes of this study, I was guided by the six characteristics of feminist research as described by Kelly (2020) instead of a specific strand of feminism or feminist theory. I chose this approach after consulting with a committee member and realizing I was more interested in being guided by an overall feminist framework that specifically values women, their experiences, and what they bring to the research process.
SCCT was selected as the main theoretical framework due to the importance it places on the influence of individual person factors such as gender, race, ethnicity, and socioeconomic status; intrapersonal, interpersonal, and historical mechanisms; and barriers and supports in relation to career development (Lent et al., 1994; Lent et al., 2002). This framework compartmentalizes interest development, choice, and performance into three distinct, but interlocking models that are aimed at explaining career development (model of how basic career interests develop over time; model of person, contextual, and experiential factors affecting career-related choice behavior; and model of task performance). In the following chapters, I will further discuss feminist research and SCCT in more depth and how they effectively framed this study.

**Purpose Statement and Research Questions**

In this feminist case study guided by Social Cognitive Career Theory, I will interview six women who have entered three dental specialties (i.e., periodontics, endodontics, and oral surgery) that are traditionally dominated by men in a college of dentistry in the Mid-South to understand how personal experiences have shaped their career interests and choices. This research is guided by the research question: What influences women to become interested in and ultimately choose a male dominated dental specialty?

**Significance of the Study**

As discussed in the introduction, women have still not achieved equity in the dental profession, specifically in the three dental specialties of endodontics (endo), oral surgery (OS), and periodontics (perio). This can be significant as studies have shown that some dental patients prefer a gender-concordant oral health provider (Bender, 2007), and are more comfortable discussing their sexual behaviors, HPV and oropharyngeal cancers with women
providers in dental settings (Daley et al., 2021). Research also shows that both men and women perceive female dentists as more likely to help them feel relaxed and willing to take time to discuss their concerns (Smith & Dundes, 2008).

This study explores why women remain underrepresented in some specialties in the dental field by learning from women’s personal experiences. Literature on this topic is extremely limited and mostly quantitative in nature (as will be discussed in further detail in the following chapters), which does not allow for a thorough exploration of how personal experiences shape women’s career interests and choices in dental specialties.

**Overview of the Study**

This first chapter has introduced the research topic, including the purpose of the research and the research questions that guided the study. Also briefly discussed was the feminist approach I take throughout this research as well as how SCCT guides this study. Finally, the chapter concluded with why this work is significant in the dental field.

Chapter 2 addresses the feminist perspective and theoretical framework for the study in depth and includes a review of the literature on Feminism and Social Cognitive Career Theory. A literature review of women in the dental specialties of endodontics, oral surgery, and periodontics follows.

Chapter 3 provides a description of the methodology and methods that were used including case study and semi-structured interviews. A discussion of trustworthiness and ethics in relation to the study and feminism follows, along with details of the site of the study and the participants. Next, the chapter presents the how the data was analyzed through coding to identify themes.
Chapter 4 includes the representation and explicit interpretation of the data beginning with vignettes of each individual participant. The themes that were identified through the lens of SCCT are then presented through the unique participants voices.

Chapter 5 concludes this dissertation with a discussion of the implications, limitations, and recommendations for future research.

Chapter 2: Theory and Literature

Chapter 1 introduced the research, its significance in the dental field and the theoretical orientation and research question that guided the study. Chapter Two will first discuss feminism and my feminist perspective followed by Social Cognitive Career Theory (SCCT). A literature review on the use of SCCT in dentistry and women in dental specialties will then follow. The chapter will conclude with a summary of these topics and how they support the purpose statement and research question.

Feminist Perspective

There is no central feminist theory or feminism (Harding, 1987), and, according to Reinharz (1992) “feminism is a perspective” and “there is no single ‘feminist way’ to do research” (pp. 240, 243). However, Ropers-Huilman and Winters (2011) do define three general assumptions that guide feminist research including that feminism: (1) values women and their experiences, (2) recognizes societal oppression that cultivates a power imbalance, and (3) maintains there is a need to bring about social change. As I am interested in exploring women’s experiences, recognize that social and cultural factors impact their choices and actions, and that change is needed in the dental field, I feel that these assumptions are met, and feminism was an appropriate choice to guide this study.
Further, women and their experiences often guide the identification of the research problems which place women’s experiences are at the forefront. My research question centers on how women become interested in and choose certain dental specialties that remain male-dominated. As Harding (1987) iterates, it is women who should be able to tell their stories and participate in the research process.

Feminist research also challenges gender-based inequities that are still prevalent in our society with a desire to enact social change (Leavy & Harris, 2019). I acknowledge that this dissertation may not enact any social change directly, but I aspire to contribute to our understanding of pioneering women’s experiences in these fields in hopes that my interpretations can potentially be used in dental schools to encourage more women to pursue these careers.

**Main Characteristics**

According to Kelly (2020) “feminist research is based on feminist methodology, that is, a feminist approach to doing research” (p. 1). Feminist methodology is not a strict set of requirements for how to conduct feminist research, rather, it encompasses a set of characteristics that feminist researchers acknowledge in their work. These characteristics include situated knowledges, intersectionality, reflexivity, political implications, critical scholarship, and consideration of power (Kelly, 2020). I will discuss these characteristics in more detail in the following sections.

**Situated Knowledges**

Feminists are concerned with how the concept of gender acts on social life by understanding and challenging inequality (Leavy & Harris, 2019). To this point, it is important to define gender from a feminist perspective. Haslanger (2000) conceives gender
as being “defined in terms of how one is socially positioned, where this is a function of, e. g., how one is viewed, how one is treated, and how one’s life is structured socially, legally, and economically; gender is not defined in terms of an individual’s intrinsic physical or psychological features” (p. 38).

With this definition of gender, it is possible to better understand how feminist researchers acknowledge the situated knowledges we create. As conceptualized by Hardaway (1988), “situated knowledges” are created from a perspective based on social location that can only offer a partial view of reality. She writes “the knowing self is partial in all its guises, never finished, whole, simply there and original; it is always constructed and stitched together imperfectly, and therefore able to join with another, to see together without claiming to be another” (p. 586).

In other words, gender shapes how researchers and participants construct knowledge based on social, legal, and economical factors. As a result, it is impossible to claim that knowledge is neutral or objective. Instead, knowledges are always shaped by bias, opinion, or experience based on the social position of the researcher and participant which only allows for a partial view of reality (Kelly, 2020).

These situated knowledges highlight the importance of transparency on how personal identities, experiences, and views influence the research topic as well as methodological choices (Kelly, 2020). To this end, I acknowledge that my interest in the topic of women who choose and pursue male-dominated dental specialties is due to experiencing and witnessing blatant sexism and misogyny in my profession. These experiences inspired me to conduct research on how experiences may help or hinder women’s interest in and pursuit of endodontics, periodontics, and oral surgery.
I am also cognizant that being a middle-class woman has allowed me the opportunity to pursue higher education and attain a job in the dental field teaching dental students which has positioned me to identify that gender-equity is a problem in certain dental specialties. This education has also led me to learn about qualitative methodologies that make this research possible. Furthermore, I am aware that being a woman and studying women is only possible due to the dichotomy of gender that is so pervasive in our society.

**Intersectionality**

Feminist researchers also address the intersectional nature of inequalities and identities. Intersectionality, as conceived by Black feminist scholars Kimberlé Crenshaw (1989, 1990) and Patricia Hill Collins (1990), considers how gender, age, sexual orientation, race, ethnicity, class, and religion form distinctive interconnected systems of oppression. Intersectionality, then, embraces the many complexities that influence oppression by considering the multidimensionality of each individual’s identities. For example, Crenshaw (1989) remarks that though two individuals may be the same gender, white women experience a level of privilege not afforded to Black women who also experience systemic racism. In other words, our many identities create different inequalities based on how these identities intersect with each other. To this end, I am not seeking to generalize any claims I make throughout this dissertation as women have many differing perspectives and experiences.

In this study, my participants are all white women, with the exception of one participant that identifies as half white and half Asian, who were privileged enough to attend professional doctorate programs and continue into specialized training. As Reinharz (1992) notes, “even before the criticism is voiced, feminists are likely to apologize for not including
diverse populations” (p. 254). I am aware of and acknowledge that none of my participants are women of color and most come from comfortable socioeconomic backgrounds making this study less diverse than I would like. This will be discussed in further details in the implications and need for future research sections.

**Reflexivity**

Feminist researchers demonstrate reflexivity. Doucet (2008) conceives reflexivity as "reflecting upon the personal, political, intellectual, and theoretical autobiographies of ourselves as researchers throughout all stages of research” (p. 74). Kelly (2020) then notes that “all research is shaped by the lived experience of the researcher; thus, reflecting on how this plays out in a given study potentially results in richer, more complex, higher-quality findings” (p. 4).

As will be demonstrated in Chapter 3, I have written a positionality statement reflecting on my lived experiences and where I stand in relation to the proposed research. To this end, I have kept a researcher journal in which I constantly reflect on how my positionality may have been impacted by my relationships with participants, data collection, analysis, and interpretation.

**Political Implications**

Feminist researchers also produce work that is political. Being “political” is defined as “relating to the things people do to gain or keep power or an advantage within a group, organization, etc.” (The Britannica Dictionary, n.d.). Knowledge production is inherently political as it has historically privileged the white, middle-class male experience as the standard account of what knowledge is and how it is produced and disseminated (Code,
This has kept the white male in a position of power highlighting the need for feminist research.

Kelly (2020) argues that for research to be feminist it, “must problematize inequality and have some implications for how unequal conditions described in the research might be addressed” (p. 5). In my research, I address the issue of inequality in certain dental specialties and identify measures that can potentially be used to address this problem.

**Critical Scholarship**

Kelly (2020) also asserts that feminist researchers contribute to conversations in critical scholarship. Critical scholarship is “focused on more specialized analysis of social structures of oppression as they relate to the experiences and subjectivities of the members in the group (Bhattacharya, 2017, p. 82). In other words, critical scholarship aims to expose and resist oppressive social structures through the lived experiences of people in an effort to inspire and enact social change (Leavy & Harris, 2019).

This study contributes to the body of literature concerning women in dental specialties as a marginalized group and brings more attention to the lack of women in certain male-dominated dental specialties. The Conclusions section of this dissertation also provides recommendations that can possibly be implemented to enact change within the profession.

**Power**

Finally, feminist researchers consider the role of power in the research process.

According to Ropers-Huilman and Winters (2011):

Feminism asserts that power relations between persons, as individuals and as members of groups, affect interactions. As such, feminist researchers generally draw attention to bother the relationships that are formed through their research endeavors.
and the ways that those relationships effect knowledge production, participants' lives, and the potential for change in specific contexts as embedded in the broader society.”

(p. 678)

I realize that by being a researcher, I automatically assume a position of power in my interactions with participants, and I acknowledge that it is my power as a researcher that has allowed me to ask certain questions, design this study, and interpret the results. To center my participants voices, I will consult them throughout the data collection, analysis, and interpretation phases of this study to shift some of the power to the women I am interviewing.

Within this study, I am also cognizant of the power my participants hold as, without them, this research is not possible. This is especially notable as there is only a small number of people who would qualify to participate based the study criteria of being a woman in endodontics, periodontics, or oral surgery that is currently or has previously attended the Mid-South college of dentistry.

This research also exhibits a power dynamic as it aims to bring awareness to the issue of women being underrepresented in endodontics, periodontics, and oral surgery. This awareness has the power to enact change on a larger scale within the profession.

**History and Key Figures**

North American feminists often articulate the feminist movement as “waves” to describe patterns in feminist activism (McCann et al., 2021). The first wave occurred in the 1840s-1920s and was led by major figures such as Elizabeth Cady Stanton and Susan B. Anthony (United States House of Representatives: History, Art, & Archives., n. d.) This wave was marked by suffragette feminism that fought for equal properties rights, voting rights, and
equal access to higher education. However, this wave was dominated by privileged white women (LaMarre et al., 2022) and neglected to acknowledge the classism, homophobia, and racism that were pervasive during that time period (Phillips & Cree, 2014).

Second wave feminism took place in the early 1960s to late 1980s when feminists became engaged in drawing attention to women’s reproductive rights, equal rights in employment, and rape and domestic violence. Women also endeavored for “the right to criticize the accepted body of knowledge, the right to create knowledge, and the right to be educators and educational administrators” (Reinharz, 1992, p. 11). During this time, it was radical to merely study women and a researcher might call her method “feminist” based on the fact that she was studying women (Reinharz, 1992).

The popular slogan “the personal is political” also came from this wave of feminism (Phillips & Cree, 2014) with major figures such as Betty Friedan, Gloria Steinem, Gloria Anzalúa, Angela Davis, bell hooks, and Alice Walker (National Women’s History Museum, 2020a) acknowledging that women have unique voices and experiences of their own. Their scholarship also highlighted institutionalized racism and sexism that they had experienced personally (Leavy & Harris, 2019).

Also notable during this time was bell hooks’ critique of white women’s research efforts where she proclaimed that “even though they may be sincerely concerned about racism, their methodology suggests they are not yet free of the type of paternalism endemic to white supremacist ideology” (hooks, 1984, as cited in Reinharz, 1992, p.12). This denunciation has continued into the third wave of feminism which followed in the late 1980s.

This third wave of feminism critiqued the second wave with feminists such as Rebecca Walker, Kimberlé Crenshaw, and Judith Butler playing key roles (National Women’s History
Museum, 2020b). During this time, postmodern ideas, the concept of intersectionality, race-informed feminist inequalities, decolonization, and queer theory became prominent in feminist scholarship (Leavy & Harris, 2019).

Relevancy

As previously mentioned in Chapter 1, I identify myself as a feminist and budding feminist researcher and utilized Kelly’s (2020) characteristics of feminist research to provide a lens through which to view all aspects of this study. Chapter 3 will provide more details on how feminism has guided my thinking throughout the process of my research.

Social Cognitive Career Theory (SCCT)

Social cognitive career theory was developed by Lent and colleagues (1994) as a social cognitive framework to explain three interrelated aspects of career development: (1) how career interests are formed, (2) how career choices are made, and (3) how career success in a chosen field is obtained. Anchored in Bandura’s (1986) social cognitive theory, SCCT is rooted in Bandura’s notion of triadic reciprocity which attempts to explain human functioning as a model in which “behavior, cognitive, and other personal factors, and environmental events all operate as interacting determinants of each other” (Bandura, 1986, p. 18). Specifically, SCCT highlights personal determinants within the triadic system, emphasizing three cognitive mechanisms that they deem particularly relevant to career development: self-efficacy beliefs, outcome expectations, and goal representations (Lent et al., 1994).

These interconnected social cognitive mechanisms- self-efficacy beliefs, outcome expectations, and goals interact and interrelate with person inputs (e.g. genetic endowment, gender, race/ethnicity, disability status, and socioeconomic status), environmental influences
(social, physical, and cultural), and learning experiences over the course of career
development (Lent et al., 1994; 2002; 2006). These interacting processes are depicted in
SCCT as three conceptually distinct yet overlapping models. Each of these specific
mechanisms and models will be discussed in more detail in the next sections.

**Social Cognitive Mechanisms of SCCT**

Self-efficacy beliefs, outcome expectations, and goals are the three social cognitive
mechanisms emphasized in SCCT which are thought to enable people to exert personal
agency in their career ventures (Lent et al., 1994; 2002). Each of these mechanisms are
present within the three distinct SCCT models (interest, choice, task performance) where
they interact to explain different aspects of career development (Lent et al., 1994; 2002).

Lent and colleagues (2006) succinctly explained the interactions of these three mechanisms:

> People tend to set goals that are consistent with their views of personal capabilities
> and of the outcomes they expect to attain from pursuing a particular course of action.
> Success or failure in reaching personal goals, in turn, becomes important information
> that helps to alter or confirm self-efficacy beliefs and outcome expectations. (p. 751)

These three social cognitive mechanisms, as well as the additional factors that
influence career development, will be explained in more detail in the following sections
along with how they are used in this study.

**Self-efficacy**

Bandura (1986) defined self-efficacy as “people’s judgements of their capabilities to
organize and execute courses of action required to attain designated types of performances”
(p. 391). In other words, self-efficacy is a dynamic set of self-beliefs that are linked to
particular activities, skills, and behaviors (Lent et al., 1994). These self-beliefs are assumed
to interact with other person, behavior, and environmental factors to determine one’s activity choice and effort, level of persistence, thought patterns, and affective responses when presented with obstacles (Lent et al., 1994).

Bandura (1977) posits that self-efficacy beliefs are derived from learning experiences through four primary influences: performance accomplishments, vicarious experience, social persuasion, and emotional arousal. Of these, performance accomplishments often have the greatest influence on self-efficacy beliefs with successful experiences strengthening self-efficacy beliefs and repeated failures weakening these beliefs (Lent, 2021).

For this study, participants’ self-efficacy beliefs are identified and explored through data collection including interview questions and journal prompts. Interview questions were semistructured to allow for an open discussion and follow-up questions in real time. Written journal prompts were also provided which allowed participants more time to reflect and write about their thoughts, feelings, and experiences outside of the interview process. Both of these data collection methods specifically focused on how specific learning experiences have impacted career interests and choices. These responses were then coded and analyzed into themes and interpreted through SCCT to understand how specific self-efficacy beliefs developed and led women to become interested in and pursue male-dominated dental specialties.

**Outcome expectations**

According to Lent et al. (1994) “outcome expectations involve the imagined consequences of performing particular behaviors” (p. 83). In other words, an outcome expectation is a person’s appraisal that a certain behavior will lead to a specific outcome (Bandura, 1977). SCCT supposes that people are more likely to engage, persist, and succeed
in activities when they believe their involvement will lead to positive outcomes as determined by both their self-efficacy beliefs and outcome expectations (Lent et al., 2002; 2006).

Participants’ outcome expectations were also explored through semi-structured interviews and prompted journaling, focusing on the perceived outcomes that led women to pursue their specific dental specialty. These responses were also then coded and analyzed into themes which were interpreted through SCCT to learn more about which outcome expectations most influence specialty interest and selection.

**Personal Goals**

Personal goals refer to one’s intentions to pursue and engage in a particular activity (choice goals) or meet a certain a performance level (performance goals) and serve as motivation to organize, guide, and regulate specific behaviors. According to SCCT, goals and goal setting help to guide career aspirations, plans, and choices. In other words, goals play an important role in motivation and the self-regulation of behavior by linking self-satisfaction to goal fulfillment (Lent et al., 1994, 1999, 2002, 2006).

Specific goals and how they have impacted participants’ career development were probed in the same manner as self-efficacy beliefs and outcome expectations, through interviews and journaling. These responses were also analyzed into themes and interpreted through SCCT.

**Additional Factors Affecting Career Development**

SCCT highlights how the three social cognitive mechanisms of self-efficacy, outcome expectations, and personal goals interact with additional factors to influence career development behavior. These factors include person inputs, contextual and environmental
influences, and learning experiences which are hypothesized to affect each other through complex, reciprocal connections (Lent et al., 1994). Each of these will be discussed in the following sections.

**Person Inputs**

SCCT acknowledges the influence of individual person factors such as genetic endowment, gender, race, ethnicity, disability status, and socioeconomic status on career development (Lent et al., 1994; 2002). The role of gender, specifically, is critical to the feminist lens of this study as (and is discussed in more detail above in the “Feminist Perspective” section of this dissertation) women’s experiences are at the forefront of this study.

SCCT (and feminism) view gender as a socially constructed feature of a person (Lent et al., 1994; Haslanger, 2000). As hypothesized in SCCT, gender differences in interests “arise largely through differential access to opportunities, supports, and socialization processes” (Lent et al., 1994, p. 108). This perspective allows for a more nuanced understanding of how social conditions, and in turn gender, have shaped the career development of six women in male-dominated dental specialties. Gender, as a specific person input, therefore shaped interview questions and journal prompts to get a better understanding of how participants perceive gender as impacting their career development.

**Contextual and Environmental Influences**

Contextual and environmental influences also play key roles in career development within SCCT. These terms are used interchangeably in SCCT and refer to objective and personal perceptions of the environment. These influences are divided into two subgroups
based on their proximity to career choice and may overlap and vary across time. (Lent et al., 1994; 2000).

The first subgroup consists of distal, or background influences. These influences shape interests and self-cognitions through factors such as opportunities for task exposure and skill development, cultural and gender-role socialization, and role model support (Lent et al., 1994).

The second subgroup consists of proximal influences which are supports and barriers experienced at critical choice junctions. These influences include emotional and financial support, job availability, and discriminatory hiring practices (Lent et al., 1994, 2002).

According to Lent and colleagues (1994), these influences “(a) help shape the learning experiences that fuel personal interests and choices, and (b) comprise the real and perceived opportunity structure within which career plans are devised and implemented” (p. 107). It is thought that these influences may moderate the relations of interests to goals and goals to actions. These relations tend to be stronger in those who perceive beneficial contextual and environmental conditions and support and weaker among those who perceive more less supportive conditions or barriers (Lent et al., 1994).

For the purposes of this study, potential background and proximal influences were explored through the process of data collection which were used to identify perceived barriers and supports through the coding and theming process. Questions were specifically crafted to include gender factors such as perceptions of gender roles and stereotypes. This information was used through the framework of SCCT to better understand how these factors moderated self-efficacy beliefs, outcome expectations, and goals and in turn impacted career choice in women dental specialists.
Learning Experiences

Also incorporated into the overarching SCCT model are learning experiences which help shape self-efficacy beliefs and outcome expectations. The four primary types of learning experiences are: (1) Personal performance accomplishments which are based on personal mastery experiences (i.e., success experiences raise efficacy estimates while failures lower them); (2) vicarious learning experiences which occur when observing others succeed or fail, especially if one has had little direct experience with which to estimate competency; (3) social persuasion when people are led to believe they can attempt or sustain certain behaviors; and (4) physiological and affective states such as anxiety, fatigue, depression which may lower self-efficacy while composure, stamina, or exhilaration may enhance proficiency (Bandura, 1977; Bandura, 1989; Bandura, 1997).

SCCT predicts that learning experiences (personal performance accomplishments, vicarious learning experiences, social persuasion, and physiological states) generate self-efficacy beliefs and outcome expectations leading to career interests and choices (Lent et., 1994; Lent, 2021). As such, these types of learning experiences were the primary focus in this study based on the research question, “what influences women to become interested in and ultimately choose a male dominated dental specialty?” Therefore, learning experiences were probed through interview questions and participant journaling to better understand how past successes, observations, social persuasion, and affective states have impacted women who became interested in and pursued male-dominated dental specialties.

Models of SCCT

SCCT consists of three interconnected models of career related interest, choice, and performance. Each of these models can be studied independently or viewed together to better
study specific aspects of career development (Lent & Brown, 2019). For the purposes of this specific study, the overarching choice model, which has the interest model integrated into it, are the primary focus due to the nature of the research question focusing on what influences women to become interested in and choose male-dominated specialties. The performance model was not utilized but will be detailed with the choice and interest models in the following sections along with a discussion of how the choice model was used in this study.

**Interest Model**

The first model within the SCCT framework is the interest model which highlights how career and vocational interests develop over time. Lent and colleagues (1994) define these interests as “patterns of likes, dislikes, and indifferences regarding career-relevant activities and occupations” (p. 88). As seen in Figure 1, the interest model illustrates that differences in career interests are due to self-efficacy beliefs and outcome expectations. Specifically, the interest model posits that self-efficacy beliefs are predictive of outcome expectations which account for differences in career interests (Lent & Brown, 2019; Lent et al., 1994).

SCCT further hypothesizes that people are most likely to develop interests in an activity when they view themselves as efficacious and anticipate positive outcomes. Interests then lead to the development of goals which increase the likelihood of an individual being involved in the activity. Further involvement in the activity produces successes or failures resulting in the revision of self-efficacy and outcome expectations leading to a feedback loop (Lent et al., 1994, 2002, 2006).

For this study, the interest model was used to understand how personal self-efficacy beliefs and outcome expectations have led women to become interested in male-dominated
dental specialties. Interview questions were structured to probe how women view their clinical and interpersonal abilities in dentistry along with their initial and current expectations for their careers.

**Figure 1**

*Model of How Basic Career Interests Develop Over Time*

![Image](image_url)


**Choice Model**

The overarching model within SCCT is depicted as the “Overarching Model of Person, Contextual, and Experiential Factors Affecting Career-Related Interest Choice Behavior” which is also referred to as the “choice model” and is illustrated in Figure 2 (Lent et al, 1994). This model seeks to explain the career choice process through self-efficacy beliefs, outcome expectations, and personal goals along with the influence of personal variables, environmental and contextual conditions, and learning experiences.
SCCT’s choice model is illustrated in Figure 2 and builds on the interest model depicted in Figure 1. As an extension of the process of interest formation, Lent, and colleagues (1994) hypothesize that choice goals, defined as “the intentions to engage in a particular action or serious of actions,” arise from self-efficacy and outcome expectations which form an intermediate link between career interests and choice. In other words, self-efficacy beliefs and outcome expectations give rise to choice goals which stimulate actions. These actions then lead to performance experiences, the outcomes of which provide feedback that can strengthen or weaken self-efficacy and outcome expectations. This feedback loop then either solidifies or redirects choice behavior (Lent et al., 1994, 2002, 2006). It is expected that interests exert their greatest influence on career choice under supportive environmental conditions while environmental barriers such as economic need, family demands, or educational disadvantages may cause choices based on interests to be more limited (Lent et al., 1994; 2006).

The choice model also hypothesizes that choice goals may be influenced more directly by self-efficacy and outcome expectations or by proximal environmental influences than through interests alone. These pathways explain why some people pursue career paths that do not reflect their interests and instead choose vocations based on barriers such as economic need, educational limitations, and lack of support. In other words, SCCT and the choice model state that when people cannot make choices based on interests alone, they will choose occupational paths where they feel they can perform sufficiently and have adequate outcomes even while they are less interesting to them (Lent et al., 1994; 2002).

For this study, the choice model was used to identify how specific factors such as perceived barriers and support, environment and learning experiences impacted women’s
self-efficacy beliefs and outcome expectations leading to interests and choice goals and actions. As with the interest model, this was accomplished through interviews and prompted journaling. To illustrate these factors during analysis and interpretation, common themes were entered into the model (Figure 4 in Chapter 5) as was done by Nelson and colleagues (2020) so that the complex interplay between all the variables are more easily discussed.

**Figure 2**

*Overarching Model of Person, Contextual, and Experiential Factors Affecting Career-Related Interest Choice Behavior*

[Diagram of the model]


**Performance Model**

Although the performance model was not used in this study, I feel it is important to holistically discuss SCCT in its entirety for future research efforts. SCCT’s performance model is focused on a series of performance-related factors such as ability, self-efficacy,
outcome expectations, and performance goals and their impact on success. As illustrated in Figure 3, ability (as assessed by past achievement, aptitude, or past performance) is thought to influence performance and persistence directly and indirectly through self-efficacy and outcome expectations. Therefore, the model in Figure 3 suggests that ability, in accordance with self-efficacy and outcome expectations, influence the types of goals that people set for themselves. In turn, the model predicts that those with higher self-efficacy and more favorable outcome expectations establish more ambitious performance goals when help to sustain performance behavior (Lent et al., 1994, 2002, 2006).

**Figure 3**

*Model of Task Performance*


**Literature Review: SCCT in Dentistry**

As my research is focused on why women develop an interest in and choose careers in male-dominated dental specialties, I conducted three searches using different groups of key terms in Google Scholar and the University of Memphis library databases. The first search
was to review the current literature on “women or woman,” “social cognitive career theory or SCCT”, and “dental or dentistry.” This review was made in an effort to examine existing theoretical integration between feminism and SCCT in the dental field. A second search used the terms “social cognitive career theory or SCCT,” and “residency or resident or specialist or specialty” to explore the applications of SCCT in the common medical training practice. A final search of the literature included the terms “social cognitive career theory or SCCT” and “qualitative or interview or qualitative study.” This review effort was to examine the current literature on the specific use of qualitative methods in studies motivated by SCCT.

Altogether, these three searches encompassed the three areas of my proposed study: the theory in relation to women and dentistry, the theory in medical fields, and the theory-driven methodology pertaining to the research topic.

These first search had a tripartite focus: SCCT, women’s interest, and dentistry. It did not locate any articles that utilized any of the SCCT models to explore what experiences have led women to form an interest in traditionally male-dominated dental specialties. However, three articles were identified that used SCCT in dentistry and dental education, but none of them focused on women or gender (Che Musa et al., 2016; Gallagher et al., 2009; Caesarani et al., 2021).

Two articles (Che Musa et al., 2016; Gallagher et al., 2009) applied the interest model to explore dental students’ career expectations, goals, and perceived influences in dental schools. They each used a questionnaire, with an item to measure the respondent’s interest in a particular specialty area. The first of these articles (Che Musa et al., 2016) compared students’ and schools’ characteristics using the chi-square test to analyze the factors that influenced career expectations and goals. Their findings show that being skilled and
competent (which speaks to self-efficacy) and achieving financial stability (which speaks to outcome expectations) influenced interest in specialization within the dental field.

The second article (Gallagher et al., 2009) also examined the effect of goals and perceived influences on first-year dental students in London. The authors found that outcome expectations such as having a work-life balance and financial security play a role in their interests in dentistry specialization.

Although these studies did not assess how a lived experience can impact students, they do provide some evidence that the interest model would be useful in exploring interests in students’ dental specialties. Further, both studies point to outcome expectations as influencing career interests, particularly with one (Che Musa et al., 2016) identifying self-efficacy as being a factor.

In search of studies on the choice model, only one article was found from Indonesia using this model to determine career choice behavior of dental students. In this study, Caesarani and colleagues (2021) collected data with an online questionnaire comprised of validated instruments (Career Decision Making Self-Efficacy Short Form, Career Decision Outcome Expectation, Career Exploration Planning or Intention Questionnaire, and Career Exploration Survey-Revised) to assess self-efficacy, outcome expectation, career intention, and career exploration of dental students. They found that self-efficacy, outcome expectations, and career intention all have a statistically significant effect on career choice in Indonesian dental students.

Because there were a meager number of studies on SCCT and dentistry, the second search was undertaken to identify studies guided by SCCT models in the general domain of medical education. Four articles that utilized SCCT, specifically the choice model, were
identified (e.g. Brooker et al., 2018; Carrico et al., 2019; Lent et al., 2002; Nelson et al., 2020). These studies provided examples of how the SCCT interests and choice models can be applied in medical education and, particularly as demonstrated by Nelson et al. (2020), can be utilized for a qualitative methodology.

The article by Nelson and colleagues (2020) conducted a qualitative study to understand why medical trainees chose a specific career in pulmonology. The researchers interviewed focus groups with SCCT driven questions that were aimed at learning experiences, self-efficacy, outcome expectations, and goals. For example: “thinking about your experiences, was there ever a time when you thought to yourself, ‘I can do this, I know I can become a pulmonologist’ and what happened?” and “during your active decision-making process, could I ask if there were any life circumstances that shaped your decision?” Their findings provided a nuanced discussion of why the particular factors led medical trainees to select a specific career.

In short, my review process shows that there is a limited number of SCCT studies on women’s dental career interests and choices, and of medical students’ choice and careers. Only one study identified adopted a qualitative method in this area of research.

Relevancy

The above review of the literature suggests that a qualitative study using SCCT is practically rare, but needed, and feasible. In this study, SCCT provided an ideal framework for understanding what factors influence women dentists becoming interested in and pursue a dental specialty and residency program. In particular, the interest and choice models within the SCCT theory guided the interview questions for data collection and data analysis.
Literature Review: Women in Dental Specialties

Dentistry has traditionally been a male dominated profession. However, the past decade has demonstrated a steady increase in gender equality in dental schools, and for the first time, the American Dental Education Association (2018) reported that the 2018 entering class had more women enrolled in dental school than men although women still remain significantly underrepresented in three dental specialties including endodontics, oral surgery, and periodontics where the number of women enrollees are 43.8%, 20.3%, and 47%, respectively (American Dental Association Health Policy Institute, 2022).

The purpose of this literature review is to shed light on the current state of the literature in regard to women in male-dominated dental specialties and to validate the necessity of a qualititative study that can answer the following question: What influences women to become interested in and ultimately choose a male dominated dental specialty?

Demographics and Definitions

Currently, advanced dental education comprises nine specialty training programs (dental public health, endodontics, oral and maxillofacial pathology, oral and maxillofacial radiology, oral and maxillofacial surgery, orthodontics, pediatric dentistry, periodontics, and prosthodontics) two general dentistry programs (Advanced Education in General Dentistry and General Practice Residency), and three programs focused on specific areas within general dentistry (dental anesthesiology, oral medicine, and orofacial pain (Thierer & Meyerowitz, 2017). Currently, the American Dental Association Health Policy Institute (2022) reports that 49.4% of students enrolled in all advanced dental programs are women.

For the purposes of this literature review, the following specialties will be the main focus of discussion: endodontics, oral and maxillofacial surgery (OS) and periodontics as
these programs remain male-dominated despite the overall number of women in dental
schools and advanced education programs achieving gender equality.

**Endodontics**

The American Association of Endodontists (2015) defines endodontics as “the branch
of dentistry concerned with morphology, physiology and pathology of the human dental pulp
and periradicular tissues.” Endodontic specialty programs have an overall enrollment of 475
residents nationwide with 43.8% of those enrollees identifying themselves as female
(American Dental Association Health Policy Institute, 2022). Twenty-four months of full-
time study is required for a residency in endodontics (Commission on Dental Accreditation,
2022a).

**Oral and Maxillofacial Surgery (OS)**

OS is the specialty with the least number of women enrollees in residency programs
in the United States. According to the American Dental Association (n. d.):

Oral and maxillofacial surgery is the specialty of dentistry which includes the
diagnosis, surgical and adjunctive treatment of diseases, injuries and defects
involving both the functional and esthetic aspects of the hard and soft tissues of the
oral and maxillofacial region. (O section)

Currently, the American Association of Oral and Maxillofacial Surgeons (2023) reports that
there are 1261 residents with 289 of those being female residents and 968 being male
residents accounting for 23% and 77%, respectively, of oral surgery enrollees. Oral surgery
also requires the longest residency with the Commission on Dental Accreditation (2022b)
requiring a minimum of four years of full-time study.
Periodontics

Periodontics is the dental specialty that focuses on the supporting structures of the teeth. Specifically, The American Academy of Periodontics (2001), defines periodontics as:

That specialty of dentistry which encompasses the prevention, diagnosis, and treatment of diseases of the supporting and surrounding tissues of the teeth or their substitutes; the maintenance of the health, function and esthetics of these structures and tissues; and the replacement of lost teeth and supporting structures by grafting or implantation of natural and synthetic devices and materials. (p. 39)

Forty-seven percent of residents that are currently enrolled in periodontics specialty programs are women (American Dental Association Health Policy Institute, 2022). The Commission on Dental Accreditation (2022c) requires three consecutive academic years in the study of periodontics.

Current Literature

Literature on women’s specific experiences that have led to an interest in male dominated dental specialties is severely lacking. The majority of the literature available that looked at dental specialty residencies studied the factors that influenced applicants’ program selection (Blissett et al., 2009; da Fonseca & Stiers, 2009; da Fonseca et. al., 2007; Lee et al., 2019; Marti et al., 2017; Noble et al., 2009; Wojnarwsky et. al, 2017), student satisfaction of their clinical training within their programs (Al-Sowygh & Sukotjo, 2010), and faculty or graduate director perspectives of women in their programs (Frantsve et al., 2003; Seale & Waggoner, 1992). Other works centered on specialty training were interested in surveying male and female students on their overall interest in pursuing dental specialties (Dhima et al., 2012; Scarbecz & Ross, 2007; Shin et al., 2015).
Although the body of literature on women’s personal experiences in dental specialties is lacking, a small body of literature does exist. Barr and colleagues (1992) conducted a study on the women pediatric dental residents (n= 216). They note that 49% of the women respondents found their dental programs were inflexible in regard to childcare, that 11% reported sexual harassment with the majority of harassment occurring by faculty or fellow residents; and that 21% believed that being female caused them to be subject to discrimination. However, this study did not provide any qualitative data to expand upon these findings to explain the results in detail.

Kongkiatkamon and colleagues (2010) explored gender disparities in prosthodontics in regard to authorship and leadership. They concluded that female dentists’ authorship in prosthodontic literature has not increased in the United States between the years 1995 and 2008. They also found that women’s’ involvement in prosthodontic leadership has been severely limited over the same time frame of 13 years. Once again, however, no qualitative data that could help explain these disparities were discussed.

Literature in the field of prosthodontics isn’t completely devoid of qualitative data. One article provided a brief summary of prominent women in prosthodontics by highlighting their personal stories. While these stories provide inspiration to other women who may be interested in becoming prosthodontists, the stories are not focused on what experiences led them to become interested in and pursue this specialty (Afshari et al., 2017).

The field of OS provides the most current, relevant data on women’s experiences. Rostami et al. (2010) surveyed female practicing oral and maxillofacial surgeons (n= 156) and residents (n= 60) in the United States. They found 61% of respondents believed there was some bias against women in their residency and 38% claimed that they had encountered
sexual harassment. In the same study, residents were also surveyed on satisfaction with their selection of OMFS as a career. Sixty eight percent strongly agreed, 23% agreed, 5% were neutral, and 3% strongly disagreed. Ninety-three percent of resident respondents would recommend OS to other women. One resident had commented, “female residents must outperform their male counterparts to get the same respect” but that they, “do believe the gender trend in OS is changing” (Rostami et al., 2010, p. 384). When surveyed on bias and sexual harassment, 60% and 29%, respectively, indicated they had these experiences during residency (Rostami et al., 2010).

Zurayk and colleagues (2019) delved deeper into the perceptions of sexual harassment in OS residencies. They conducted a survey to identify the prevalence and nature of sexually harassing behavior (SHB) experienced by women OS professionals and residents (n=67). The study found that 96% of women reported experiencing at least one form of sexually harassing behavior, with 83% reporting that these behaviors had occurred during OS training. The most common SHB reported was being habitually told suggestive stories or offensive jokes (86%). Of those who had experienced SHB, only 33% reported their experiences to someone in authority, and only two of the reported abusers had action taken against them. The most common reason for not reporting SHB was they did not believe that reporting abuse would accomplish anything. Only 42% believed their leaders were committed to establishing a comfortable environment and preventing sexual discrimination.

Of those that had experienced SHB, 17% reported it interfered with their ability to work. 52% reported it had created a hostile work environment, and 45% reported it had a negative effect on their self-confidence as a professional (Zurayk et al., 2019). While this
study highlights the prevalence of sexually harassing behavior with OS residencies, qualitatively driven data of the actual experiences were lacking.

In another study focused on women in OS residencies, Marti and colleagues (2017) conducted a cross-sectional study by providing a secondary analysis of data from the American Dental Association as well as a survey of practicing oral surgeons (n= 417) and residents (n= 267) in the United States. This study included both women and men respondents allowing for comparisons between the two groups. They concluded that female OS residents had significantly lower job satisfaction and were more likely to leave OS programs than male residents. Ninety seven percent of male residents reported that they would choose OS again compared to 85% of the female residents.

Another study also focused on male practicing surgeons, residents, and program director’s perspective of women in OS. They found that, of the resident respondents (n= 92) surveyed, 82% believed that women are as capable as men with 40% of those who disagree believing that women lacked physical strength and 80% believing they lacked emotional strength. Ninety-eight percent of program directors (n= 56) that responded believed that women are as capable as men to practice OS (Rostami & Laskin, 2014). However, this article did not highlight the differences between men and women’s unique perspectives.

While the majority of studies in the OS field were conducted using survey instruments, one study by Uppgaard (2018), qualitatively described her personal experiences while in her OS residency program. She detailed an experience of when she was groped by a patient during her first year in residency. After she left the operation because of the harassment, the attending surgeon told her, “Well Rachel, as a woman, I can only imagine that this has happened to you 6 or 7 times” and indicated that she was wrong to leave the
operation (p. 1604). She also reported that inappropriate comments were made by faculty members during her time as a resident.

After her residency, Uppgaard (2018) took an academic position supervising the OS clinic in a hospital where gender bias and sexism continued to be a concern. When she voiced these concerns, colleagues warned her to, “just accept it so that someone would cover for [her] if [she] decided to have a baby” (p. 1604). Her supervisor at the time would never intervene on her behalf and she left the position due to continued gender discrimination. She concluded that she had, “learned what so many women before [her] have learned: Gender still matters” (p. 1605). Her article highlights the importance of continuing to explore and honor women’s unique experiences in residencies, and it also illustrates the power of qualitative data to do so.

These findings indicate that far fewer women than men are applying to OS residencies (Bruner & Campbell, 2010) and enrolling in oral surgery programs (American Dental Association Health Policy Institute, 2022), and that gender-based discrimination is a problem that should continue to be investigated. While the current literature has primarily utilized survey methods to investigate the perceptions and personal satisfaction of women oral surgeons and residents, none of these studies have qualitatively explored these experiences across multiple male-dominated specialties.

Relevancy

While the articles focused on OS residents provide some data on women’s experiences in a male dominated specialty, no articles appeared to focus on endodontics or periodontics, two specialties that also continue to remain male-dominated. Studies focused on women’s unique experiences that shaped their career interests and choices to pursue a
dental specialty also remain lacking. A qualitative study focused on women’s specific and unique experiences could provide more context on why women become interested in and choose OS, endodontics, and periodontics where they are underrepresented in regard to gender.

Chapter Summary

This chapter discussed feminism and my feminist perspective through the lens of Kelly’s (2020) characteristics of feminist research followed by an in-depth description of SCCT and how this theoretical perspective was used in this study. Reviews of the literature on women in male-dominated dental specialties and SCCT in dentistry were also included.

The section on SCCT detailed the social cognitive mechanisms of self-efficacy beliefs, outcome expectations and personal goals and how they interact with additional personal and environmental factors to affect career development. A review of the literature on SCCT in dentistry along with why this study is particularly needed and relevant followed.

The final section of this chapter explored the literature on women in dental specialties, featuring the literature specific to endodontics, periodontics, and prosthodontics. The conclusion of this section focused on why the literature, or lack thereof, highlights why this work is relevant to the dental and education fields. These sections, when viewed together, demonstrate why using a feminist research approach in tandem with SCCT for this study, which is focused on women’s interests and choices in the dental field, is appropriate.

Chapter 3 will discuss the selected methodology in depth and how feminism and SCCT will be used to explore the research question: What influences women to become interested in and ultimately choose a male dominated dental specialty?
Chapter 3: Methodology and Methods

Chapters 1 and 2 provided an overview of the study, the perspective and theoretical framework that were utilized, and a literature review that provided context on why this work is important and needed in the dental field. Chapter 3 will outline the methodology and methods that I utilized for this qualitative study that sought to understand why women become interested in and choose dental specialties that remain traditionally male-dominated (endodontics, oral surgery, and periodontics) by answering the question: What influences women to become interested in and ultimately choose a male-dominated dental specialty?

The first part of this chapter will describe case study, the specific methodology I selected for this study. The second section will detail my chosen methods for data collection which were interviews, investigator journaling, and prompted participant journaling. The next two sections will focus on trustworthiness, ethics, and my positionality in relation to the research. The fifth and sixth sections will describe the site for the study as well as the participants. Finally, a description of how the data was analyzed and interpreted will conclude the chapter.

Methodology

Case Study

According to Merriam (1998) “there is little consensus to what constitutes a case study or how this type of research is done” (p. 26). She goes on to note that the most important characteristic of case study research is in identifying and determining the boundaries of the object of study. In other words, this type of research involves an in-depth study of a person, people, issue, and/or place within a bounded system. Baxter and Jack (2006) provide the example of a study involving women who are deciding whether or not to undergo
reconstructive surgery. In this example, they define the case as the decision-making process of 20–40-year-old women who have experienced breast cancer. They bind the case by providing detailed definitions of reconstructive surgery and radical mastectomy and indicating that the women studied are single women in their 30’s who received care at a specific hospital between the months of January and March.

As illustrated above, this bounding allows the researcher to set specific parameters of what they are studying and the scope of the research. Specifically, Yin (2013) postulates that “the classic case study consists of in-depth inquiry into a specific and complex phenomenon (the ‘case’), set within its real-world context” (p. 321).

**Brief History**

The case study approach was first noted in 1829 when a French sociologist and economist, Le Play, used case study in his work examining the economic conditions of the working class (Savin-Baden & Howell Major, 2013; Sclafani, 2017). Case study research continued into the 1900s with case study work being attributed to the early American pragmatists and female sociologists in Chicago. These researchers addressed problems such as those of women employed in the labor market (Reinharz, 1992).

After World War II, case study research declined as logical positivism and quantitative methods became favored upon researchers who criticized qualitative case studies as being non-scientific (Johansson, 2007). This trend continued until the 1960s when researchers became concerned of the potential limitations of quantitative methods. During this time, there was a renewed interest in case study research with concept of “grounded theory” being developed as “a way of arriving at theory suited to its supposed uses” (Glaser & Strauss, 1967).
Case study was later introduced to education by Robert Stake and Robert Yin, both of whom have produced approaches that guide current case study methodology (Savin-Baden & Howell Major, 2013). Following in the late 1990s, Creswell and Merriam identified case study as one of the primary research approaches utilized in qualitative research which have been used in educational fields for many years (Merriam, 1998; Savin-Baden & Howell Major, 2013).

**Why Case Study?**

Case study can be broadly defined as the process of conducting research, the unit of analysis selected for the study, or the end product of a case investigation. A researcher might select a case study as an approach to illuminate a phenomenon without a bounded system such as a person, program, intervention, or group (Merriam, 1998).

Feminist case studies, specifically, aim to rectify research corrupted by male-dominated theorizing and misogyny. They usually consist of a fully described event, person, group, or organization and have three major purposes: to seek to analyze the change in a phenomenon over time, to analyze the significance of a phenomenon, or to analyze how parts of a phenomenon are related (Reinharz, 1992).

According to Reinharz (1992) “feminists write case studies for the same reason that nonfeminist scholars write them—to … explain the process of development over time, to explore uncharted issues starting with a limited case, and to pose provocative questions” (p 167). From a psychology perspective “the focus on the individual as a way to investigate some aspect of human behavior characterizes the psychological case study” which “employs theories … from psychology in investigating educational problems” (Merriam, 1998, pp. 36-37). Together, feminism and psychology, specifically SCCT, provide a framework that
allowed me to explore the issue of the inequity of women in certain dental specialties by studying individual women who made the decision to select and undergo male-dominated dental residencies.

I also found that case study was useful as a case is typically bounded in its focus, narrow in scope, and has limiters which leads to only a finite number of people that can be studied (Savin-Baden, 2013). Within these bounds of this study, the participants must have identified as women in a male dominated dental specialty of endodontics, oral surgery, or periodontics. They must have also been enrolled in or graduated from a specific program in one college of dentistry. Furthermore, the boundaries of this study involved viewing their career choices and interests through, specifically, SCCT. This bounded nature of case study research appealed to me personally as I felt it would keep me focused on my research purpose and questions throughout the research process and analysis.

There are several types of case studies, and for the purpose of this study, I used a multiple case study design. As stated in Bhattacharya (2017) in a multiple case study “a researcher selects and issue or problem to investigate, defines what the bounded system of the case would look like, and selects several cases to explore the issue” (p. 110). In regard to this study, the issue I investigated is the inequity of women in certain dental specialties and the six participants made up six unique cases. Each individual case was analyzed through themes and the career-related interest choice behavior model outlined in SCCT.

Case Study and Feminist Research

Feminism aligns well with case study as they have been used together in feminist research for multiple purposes indicating that they have a history of producing sound and rigorous qualitative research (Reinharz, 1992). Specifically, case study research has been
used to understand women’s experiences and how interactions impact interests and actions (Bhattacharya, 2017). As I was most interested in exploring how women’s experiences have impacted their desire to pursue male-dominated specialties, this theoretical framework and methodological approach felt seamless in guiding my study.

Reinharz (1992) states that feminist research contributes to the disciplines, draws from the disciplines, and reacts against disciplines in terms of data, methods, and theory” (p. 246). Methodological choices including how I approached data collection, interview questions, analysis, interpretation, and the final representation of the data were also considered through a feminist lens. As case studies are bounded, I saw feminism as the glue that held all parts of my study together, ensuring that I remained focused on my research question and honoring women and their experiences through SCCT.

**Methods**

One hallmark of case study research is that multiple data collection strategies are used. Yin (2018) specifically identifies six commonly used sources of evidence used in data collection as: documentation, archival records, interviews, direct observations, participant-observations, and physical artifacts. For the purposes of this study, I utilized interviews along with two forms of documentation, prompted participant journaling and researcher journaling.

**Documents**

Merriam (1998) has “chosen the word document as the umbrella term to refer to a wide range of written, visual, and physical material relevant to the study at hand” (p. 112). Documents can be public records, personal documents, physical material, or can be specifically created for the purpose of the study. For this study, I used two forms of
researcher-generated documents which are documents that are prepared either by the researcher or for the researcher by the participants in the study (Merriam, 1998).

Throughout the course of this project, I kept a researcher journal as a method of data collection. As Richardson writes, “writing as a method of inquiry departs from standard science practices. It offers an additional—or alternative—research practice” (p. 923). She goes on to note that writing as a method allows the researcher to investigate how they construct knowledge of the world, ourselves, and others. In this journal, data was gathered through the documentation of nuances I observed during interviews, feelings I had about specific stories being told, and thoughts I had about the participants and their experiences.

Data was also collected through the prompted journaling of the study participants. Marshall and Rossman (2016) remark that a researcher may propose that participants generate documents through journaling as a part of in-depth data gathering. These documents can portray the values and beliefs of the participants and evoke deeper insights into their experiences. Prompts included asking the participants to write about experiences that led to them becoming interested in and choosing their specialty and barriers and supports that they experienced during that process.

Interviews

I selected interviews as my primary method for data collection as, according to Yin (2018), interviews are one of the most important sources of data collected for a case study. In particular, I conducted semi-structured interviews where I prepared questions and potential probes in advance, but allowed for flexibility when needed (Bhattacharya, 2017).

Interviews were an ideal method for my research as they are commonly used by feminists and within case studies and allowed for continued alignment within my study.
(Reinharz, 1994). Interviews also allowed for the most rich and interesting data as my research question was primarily focused on learning more about women’s personal past experiences and current perspectives that can only be told by women through language.

Confidentiality

The collection of potentially identifiable information throughout the research process was not taken lightly and every effort was taken to ensure the confidentiality of each participant. These efforts included assigning each participant a pseudonym to be used throughout and following the study, conducting interviews in a private place or via Zoom, and redacting any identifiable information such as names and geographical location that were discussed in the interviews.

Data was stored in a folder designated for the study on the University of Memphis OneDrive, which is password protected. Interview recordings were transcribed with potentially identifiable information redacted and were stored in the OneDrive. Following completion of this dissertation, the recordings will be destroyed via deletion of the OneDrive files or shredding of documents. The transcripts and memos with identifying information redacted will be stored for potential use in future research for a period not to exceed 5 years.

To ensure each participant understood the efforts made to keep their potentially identifiable information secure and confidential, but that there were potential limits to these efforts, informed consent was obtained prior to beginning the interview or collecting completed journal prompts. The informed consent process (Appendix B) detailed the study’s purpose, duration, procedures, alternatives, risks, and benefits and the participant was encouraged to ask questions and consider all options. The participant was also made aware
they can voluntarily withdraw from the study at any time for any reason without any consequences.

**Trustworthiness and Ethics**

**Trustworthiness**

Lincoln and Guba (1985) developed four criteria for ensuring trustworthiness in qualitative research: credibility, dependability, confirmability, and transferability. Each of these constructs provide a range of strategies that can be adopted by researchers to ensure trustworthiness in a study. Each of the four criteria and those strategies that are pertinent to my study are discussed more in the paragraphs below.

Credibility is concerned with promoting confidence that the phenomena under study has been accurately recorded. To ensure credibility in this study, I used triangulation, which is the use of multiple sources or methods to confirm interpretations of the data (Denzin, 2009/1970). I accomplished this by interviewing multiple participants and using different methods for data collection (interviews, researcher journaling, and participant journaling). I also engaged in peer debriefing which is the process of allowing a peer to explore aspects of the inquiry in an effort to keep the researcher “honest” by asking probing questions to explore potential biases, meanings, and interpretations (Lincoln & Guba, 1985). This process was undertaken with the qualitative methodologist on my committee.

Dependability is the notion that if a study were to be repeated, similar results would be obtained. Lincoln and Guba (1985) posit that “since there can be no validity without reliability (and thus no credibility without dependability), a demonstration of the former is sufficient to establish the latter” (p. 316). Shenton (2004) suggests that to address dependability in practice, the researcher should report, in depth, the processes within the
study as to allow a future researcher to repeat the work. As such, this chapter will further
discuss the nuances of the research process.

Confirmability is concerned with ensuring, as much as possible, that the findings of a
study are the result of the experiences and ideas of the participants and not based on the
biases or preferences of the researcher (Shenton, 1994). To establish confirmability, it is
recommended that the researcher use triangulation techniques, provide a detailed account of
methodological choices, and keep a reflexive journal throughout the research process
(Lincoln & Guba, 1985; Shenton, 1994). For this case study, I used each of these techniques
throughout the study as triangulation and reflective journaling are built into the methods of
this study and by providing thorough description of my methodological choices in this
chapter.

Transferability addresses the extent to which the findings of a study can be applied to a
larger population. Lincoln and Guba (1985) acknowledge that the establishment of
transferability, strictly speaking, is impossible. Instead, they remark that the researcher “can
provide only the thick description necessary to enable someone interested in making a
transfer to reach a conclusion about whether transfer can be contemplated as a possibility” (p.
316). Therefore, it is not the researchers’ responsibility to provide an index of transferability,
it is their responsibility to provide the information necessary to make transferability
judgements possible (Lincoln & Guba, 1985). As discussed in the previous paragraphs, a
thick description of the entire research process is further discussed in this chapter.

Ethics

Strictly speaking, ethics are about morality and the determination of what is right and
wrong. In research, ethics are where morality merges with research practices (Leavy &
Harris, 2019). Guillemin and Gillam (2004) suggest that ethical work occurs daily over the course of the research process. This ethical work involves two dimensions—procedural ethics, which constitute seeking approval from and ethical review board and “ethics in practice,” which involve the everyday ethical issues that occur while conducting research (Guillemin & Gillam, 2004).

**Procedural Ethics**

Procedurally, I first applied through the University of Memphis Institutional Review Board (IRB) for approval prior to beginning data collection and refreshed my Collaborative Institutional Training Initiative (CITI) certification. This study underwent exempt review and was approved (IRB number: PRO-FY2023-444).

**Feminist “Ethics in Practice”**

Although there are many approaches to feminist ethics in social research, feminist scholars have certain shared ethical concerns, including their concern with informed consent, which should be a “daily practice” throughout the course of a study (Christians, 2005; Edwards & Mauthner, 2002; Guillemin and Gillam, 2004; McCormick, 2012). Marshall and Rossman (2016) write that informed consent ensures that:

- Participants are fully informed about the purpose of the study, that their participation is voluntary, that they understand the extent of their commitment to the study, that their identities will be protected, and that there are minimum risks association with participating. (p. 52)

Throughout the research process, I reviewed consent with my participants including how the research might impact them positively or negatively. I answered all questions they had
and discussed with them that this research may have unforeseen complications or effects which will be mitigated by maintaining open lines of communication.

Feminists also acknowledge that the researcher must co-construct meaning and understanding with participants. Therefore, it was important that I remained aware of power structures within the subject/researcher binary and throughout the research process, I aimed to be viewed as more of a peer than an “all-knowing” being. I was also cognizant to try to create rapport in a comfortable, open environment which is also a “daily practice” that I made a priority.

**Positionality Statement**

As a feminist scholar, I feel it is important to note my position in relation to my research. I am a white, middle-class woman raised in the southern United States with an advanced degree. This automatically places me in multiple places of privilege. I do realize that my privileged upbringing and cultural experiences shape how I view and interpret the world around me which have impacted every methodological choice I made.

In addition to these personal characteristics, I also acknowledge that my professional life may have influenced my research and how my participants and I approached each other. While I have never attended a dental residency program, I have been in the dental profession as a dental hygienist for 13 years and am currently an assistant professor teaching dental students in a clinical setting. Some, but not all, of the participants and I have a professional and/or educational relationship that existed prior to this study, and I recognize that these relationships likely influenced the interviews in ways I realize and perhaps do not realize.

On one hand having preexisting personal relationships may have allowed for some participants to be more open, but on the other, this may have created an unintended power
differential that affected their openness in the interviews. I attempted to mediate this by thoroughly explaining that my interest is coming from the perspective of a graduate student and not a colleague or peer.

For those participants with whom I did not have a preexisting relationship, I recognized that I may not be as comfortable interviewing them as someone I am already acquainted with. This could have impacted the questions I asked and how deep I, and the participant, were willing to go into their experiences. However, this could have also led to the participants and I being more open to discussing certain topics. I attempted to negotiate these concerns by being open to discussing my personal history and experiences and why I am interested in this topic.

Site Selection and Participants

This study took place in Memphis, TN or via a secure Zoom meeting depending on the participants’ location and comfort. The interviews that occurred in person took place in a private conference room on a university campus that was reserved prior to the interview. Zoom interviews were facilitated through a secure, password protected link.

Following IRB approval, purposive sampling was undertaken to identify six participants, two women from each specialty of interest (endodontics, oral surgery, and periodontics) who identify as women and are a current resident or recent graduate from the past three years of the Mid-South college of dentistry. These participants were recruited based on these specific characteristics that were pertinent to the research question and their willingness to participate in the study. As seen in Table 1, each participant was given a pseudonym that was used during the course of the study and in the interpretation of the data.
Table 1

Pseudonym Guide

<table>
<thead>
<tr>
<th>Participant</th>
<th>Specialty</th>
<th>Pseudonym</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant 1</td>
<td>Current endodontics resident</td>
<td>Violet</td>
</tr>
<tr>
<td>Participant 2</td>
<td>Past endodontics resident</td>
<td>Candice</td>
</tr>
<tr>
<td>Participant 3</td>
<td>Current oral surgery resident</td>
<td>Brianna</td>
</tr>
<tr>
<td>Participant 4</td>
<td>Past oral surgery resident</td>
<td>Billie</td>
</tr>
<tr>
<td>Participant 5</td>
<td>Current periodontics resident</td>
<td>Sarah</td>
</tr>
<tr>
<td>Participant 6</td>
<td>Past periodontics resident</td>
<td>Jennifer</td>
</tr>
</tbody>
</table>

Analysis and Interpretation

Savin Baden and Howell Major (2013) point out, “analysis requires breaking apart data to produce concepts and themes, interpretation involves the translation of these concepts and themes”. In other words, “analysis describes what was said whereas interpretation attempts an explanation or translation of what was said” (p. 452). For this study, I used thematic analysis, that is, the breaking apart of interview and journal data into themes prior to interpretation. In the next section, I will discuss how I analyzed the data through coding into themes. Chapter 4 will then detail my process of data interpretation.

Analysis

Thematic analysis was selected for this study as Bhattacharya’s (2017) posits:

Data analysis in case studies are inductive in nature where the research examines raw data sources, chunks information from those raw data sources, groups information
that is similar in meaning, and then looks for commonalities across and within these
groups to identify broad patterns or themes. (p. 112)

While Bhattacharya (2017) does not directly define the type of analysis she is speaking of
in this quote as “thematic analysis,” I interpret her statement to be referring to thematic
analysis because thematic analysis is “a method for identifying, analyzing and reporting
patterns (themes) within data” (Braun & Clark, 2006, p. 79). Themes, therefore, allow the
researcher to think about the relationships between the codes and themes and see patterns
that are important in regard to the research questions.

To identify the themes across the data set, I went through four rounds of coding.
Saldaña (2015) defines codes as “most often a word or short phrase that symbolically assigns
a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-
based or visual data” (p. 3). Each round of coding allowed me to become more immersed in
the data and better understand my participants interest in and choice to specialize in male-
dominated dental specialties.

The first three rounds of coding used an inductive approach, where I coded the data
“without trying to fit it into a preexisting coding frame or [my] analytic preconceptions”
(Braun & Clark, 2006, p. 83). My final round of coding utilized a structural approach where
the interview transcripts and journal entries were coded based on the research question. The
next paragraphs will provide a more detailed discussion of the approaches I took to code the
data.

Initial coding was utilized in the first round of coding to code the interview transcripts
and journal entries. This method was chosen as it provided an opportunity to reflect on and
become more familiar with the contents and nuances of the data (Saldaña, 2015). During the
coding process, I assigned short words or phrases to small sections of transcripts and journal entries. Following this initial round of coding and after consulting with a committee member, I realized my codes were too broad and not specific enough to each unique participant. This led to a second round of initial coding where codes were assigned that were more specific to each unique participant and their experiences.

Following the first two rounds of initial coding, in vivo coding was undertaken to “prioritize and honor the participant’s voices” (Saldaña, 2015, p. 106). During this process, I highlighted, bolded, and underlined words and phrases stood out in the data corpus in an effort to “anchor [my] analysis in [my] research participants’ worlds” and have a “have a crucial check on whether [I] have grasped what is significant” (Charmaz, 2006, p. 57). This round of coding also allowed me to become further immersed in the data prior to my fourth, and final, round of coding.

I chose structural coding as the final round of coding as I was interested in identifying data that related to my specific research focus. As noted in Saldaña (2015) “structural coding both codes and initially categorizes the data corpus to examine comparable segments’ commonalities, differences, and relationships” (p. 98). I used structural coding as a method to code segments of data from each participant into specific topics and categories related to my research question and theoretical framework (SCCT). This final round of coding further strengthened my analysis and understanding of the data.

For the final phase of analysis, I sorted through the codes and identified three themes or “patterns of meaning” across the data set (Braun & Clarke, 2012). These themes were determined based on my research questions, SCCT, and the analysis of the data. Six broad themes were initially identified, but after discussing these with my committee member, they
were further condensed into three themes. The final themes that were identified were: (1) interest to specialize was cultivated through learning experiences in dental school, (2) residency is not conducive to family life, and (3) having a strong support system led to success. Each of these themes is explored in more detail in Chapter 4.

Chapter 4: Data Representation and Explicit Interpretation

Braun and Clark (2006) note, “a thematic analysis has limited interpretive power beyond mere description if it is not used within an existing theoretical framework that anchors the analytic claims that are made” (p.97). In other words, coding and thematic analysis will not reach the depth of interpretation if the researcher does not make good use of their selected theoretical framework and the related literature.

In this chapter, I use the codes and themes identified during my coding process discussed in Chapter 3 to analyze and interpret the data. Specifically, I interpreted the themes through my participants stories and experiences, using SCCT as a theoretical framework to guide analysis.

This interpretation begins with the participant vignettes in the next section. These vignettes provide a detailed account of each individual’s upbringing and pathway to the dental specialty they chose and provide contexts for the focused discussion on the three themes identified from the analysis the provide a better understanding of why the participating women became interested in and chose male-dominated dental specialties.

Participant Vignettes

Violet

Violet is a 27-year-old white woman from a small city in the south who I met while she was my dental student in 2022-2024. She grew up with two supportive parents and a
brother. Her father is a physician, and her mother was a certified public accountant prior to being a stay-at-home mom while her brother is currently an engineer. Violet attended a high-pressure private school focused on preparing graduates for college success and graduated in the top 10 of her high school class. She also participated in extracurricular activities such as tennis and was fortunate enough that she didn’t have to work through school and was supported financially by her parents.

Violet chose dentistry while an undergraduate at a larger state college. She was initially focused on attending medical school but after watching her father come home late from work as a physician and wanting a better work/life balance, she began to rethink her career choice. She was further dissuaded from medicine after she did not do as well on the MCAT (Medical College Admission Test - required for admission to medical school) as she had hoped. Feeling unsure about her career path, she met with a “respected” family friend she knew from her high-pressure private school. This friend had just graduated from dental school and Violet felt she would be a good person to talk with about other potential career options. During this conversation, Violet’s friend talked about why she chose dentistry as well as her own experiences in dental school. This ultimately led Violet to consider dentistry and she began preparing to take the DAT (Dental Aptitude Test - required for admission to dental school). After scoring in the top 90th percentile on the test, she was further encouraged to apply to dental school.

Violet entered dental school with the goal to do well and graduate a competent clinician and was not initially interested in specializing. She became interested in endodontics following a conversation with another friend who was an endodontics resident at that time who complimented her skills in an endodontics lab he was overseeing. She also
realized that she enjoyed doing a narrower set of endo procedures more than the procedures she would primarily be performing as a general dentist. After realizing her desire to specialize, she was able to significantly improve her GPA, improving her class rank and making her more competitive for residency. She was then accepted into the residency with her first application.

**Candice**

Candice is a 35-year-old white woman from a small town in the south. I also met Candice when she was one of my dental students over five years ago. Her mother has a master’s degree and has worked as a nurse, drug representative, and teacher but it now retired. Her father also attended college and is currently a mechanical engineer. Candice’s parents divorced when she was four and her mother remarried quickly thereafter. As a result of this marriage, she has two stepsiblings that were significantly older than she was that never lived with the family. When Candice was nine, her mother and stepfather had a child, her sister, that she remains close to.

Candice has a history of being a high-achiever academically and was deemed to be too advanced for kindergarten when she started at her public school and was moved to the first grade where she was the youngest in her class. She graduated third in her high school class and chose to go to a small liberal arts college for her undergraduate education where she majored in Anthropology and Government. She was fortunate enough that her mother was able to help her pay for college. Following graduation from college in 2009, during an economic downturn, she was unable to find a job utilizing her degree and worked small, odd jobs, including babysitting for a male endodontist and female general dentist. This
experience, along with her feeling unfulfilled in her work life, led her to begin to consider
dentistry as a potential career path as she witnessed that women can be successful dentists.

After being encouraged to consider dentistry as a career by her employer, the female
general dentist, she began looking at the requirements for acceptance into dental school. She
began taking nighttime and online courses while continuing to work until she was able to
apply to dental school. Candice was most concerned about how she would be able to afford
dental school but was able to take out student loans. She was accepted to dental school with
her first application and ended up graduating first in her dental school class.

During dental school, Candice realized she was interested in specializing as she did
not enjoy many aspects of general dentistry, including performing general dental procedures;
but preferred the precise, detailed, and technical aspects of endodontic procedures. She was
also encouraged by a female endodontist on faculty to apply to endodontic residency
programs. In her first-year effort to secure a place in an endodontic residency, she was not
accepted by any program, but received positive feedback on her interviews. Left with no
other options that would utilize her new dental degree, she chose to enter into an established
private practice with the owner dentist for a year while she considered if she would reapply
to endo residency the following year. Candice’s negative experiences with the owner dentist,
including having ethical differences in treatment philosophies and the stress of long work
hours and back pain from practicing further cemented her desire to reapply for endodontics
residency. Following her application, she was accepted into two endodontic residency
programs but chose the Mid-South college of dentistry based on their low tuition rates.
Brianna

Brianna is 33 years old and is of mixed race (she identifies as half white and half Asian). I had not met Brianna prior to our interview as she came to the Mid-South college of dentistry following graduation from her dental school. She grew up in a large city in the south-central United States with her two parents and brother. Her mom has a master’s degree in education and was a teacher while her dad has a bachelor’s degree and works as an oil field engineer. Her brother has a degree in medicine and is currently a general surgery resident. Brianna attended a private school for her K-12 education where she felt a good sense of community and support from her teachers. She was also afforded numerous opportunities to participate in extracurricular activities such as field hockey, softball, tennis, and clubs.

Following graduation from high school, Brianna attended a large private Christian university in another south-central state for her bachelor’s degree. Following graduation, she was interested in pursuing medicine but was unsure, so she decided to pursue a master’s degree in public health to better hone into her career path. After deciding she did not want to work in a hospital setting or research laboratory, she began shadowing in dental offices. Although she cannot remember exactly when or why she decided to pursue dentistry, she does credit her time shadowing with helping her realize that she really enjoyed dentistry. She also liked the fact that dentistry does not require a residency prior to entering practice as does medicine.

Brianna was initially waitlisted from dental school but was accepted the next year. Her goals upon entering dental school were that she would be able to competently practice dentistry immediately following graduation as she had no plans to specialize. Her experiences in dental school extracting teeth and volunteering in dental extraction clinics are
what initially attracted her to oral surgery, although she did not believe she had the stereotypical “cut-throat” personality that she believed was required of oral surgeons. She credits an oral surgery faculty mentor in dental school for changing her views on who can be an oral surgeon as this faculty member did not fit the stereotype and was open and engaging, allowing her opportunities to be exposed to more aspects of oral surgery. Feeling encouraged, Brianna applied to, and was accepted into externships where she was able to shadow residents for a short period at two other oral surgery programs. These experiences further solidified her desire to apply to oral surgery programs.

While Brianna knew she wanted to pursue oral surgery and become an oral surgery resident, she was aware that her class rank in the 50th percentile of her dental school class would not likely be competitive enough for acceptance into an oral surgery residency. To mitigate this concern, she decided to initially apply for noncategorical internship opportunities instead. She felt that by pursuing an internship year, she would have a better chance at being accepted into a residency program where she could prove herself and be more competitive when she applied for a full residency spot the next year. She was accepted as a noncategorical intern at the Mid-South college of dentistry for one year before being fully accepted as a four-year resident the following year.

Billie

Billie is a 32-year-old white woman I met eight years ago when she was in one of my first classes of dental students. We have remained friendly over the years since her graduation from dental school and still occasionally keep in touch. She comes from a large family with five brothers and four sisters in the Mid-South region of the United States. Billie’s mom did attend some college but did not graduate and is a stay-at-home mom and
her dad is a pastor that is heavily involved in church and community. She was homeschooled until high school when she received a scholarship to attend an all-girls private school where she was on the rowing team and excelled academically, earning a full scholarship to a small Christian university close to her home.

Billie is unique in that she has always known she wanted to be a dentist and never considered any other career path. Her choice to pursue dentistry was further solidified after volunteering for medical and dental mission trips. After doing well in college and scoring highly on the DAT (Dental Aptitude Test- required for dental school admission), she was accepted into two dental schools. She chose the Mid-South college of dentistry due to its proximity to her family and in state tuition, although she did have a college fund set up by her grandparents.

Upon entering dental school, she was not interested in pursuing a specialty. This changed during a lecture during her second year when an oral surgeon sparked her interest in oral surgery and caused her to reconsider specializing. During this lecture, photos of an oral surgery case involving a gunshot wound to the face were shown where Billie distinctly remembers thinking, “I want to be able to put that back together.” This experience led Billie to pursue as many opportunities as possible in the oral surgery department including shadowing current oral surgery residents and sitting in on surgical cases. Finding oral surgery far more interesting than general dentistry further strengthened her desire to pursue an oral surgery residency.

Billie applied to oral surgery residency programs during her fourth year of dental school and despite her ranking third in her dental school class, she was only offered a noncategorical internship position at the Mid-South college of dentistry. During this year, she
was able to grow personally and professionally and the next year she was the first woman ever accepted as a resident into the oral surgery program.

Sarah

Sarah is a 27-year-old white woman that I have gotten to know as a resident in the periodontics program at the Mid-South college of dentistry where I work. She was born and raised as a single child in the Midwest. Her mother has some college education and worked as a medical technician prior to becoming employed as a factory worker. Her father graduated from high school but did not attend college and worked as a mailman and lineman prior to his death when Sarah was 10 years old. Her father’s death left Sarah alone a lot throughout middle school and high school as her mother worked nights. She credits her natural academic abilities and the encouragement of her best friend and best friend’s family to her being a first-generation college graduate. She also credits her best friend with sparking the idea of becoming a dentist.

Sarah attended a private Jesuit university in the Midwest for both her undergraduate education and dental school. She knew early on in dental school that she would specialize as she found general dentistry to be mundane and that it did not allow for her to exert her full potential. Her interest in periodontics was initially inspired by a female periodontist who gave a lecture and exuded “power and femininity and strength” and was further influenced after learning more about the impacts of oral health on the entire body. She also considered that specializing in periodontics would allow her a comfortable work/life balance where she would be able to have a family and work as little or as much as she desired while being financially secure.
Determined and impassioned to pursue periodontics, Sarah finished dental school with a GPA of 3.89 and applied to residency programs. After narrowing down her choice of residency programs to two, she selected the Mid-South college of dentistry and was accepted as a resident on her first application.

Jennifer

Jennifer is a 35-year-old white woman that I have also gotten to know during her time as a periodontics resident and now as part time faculty at the Mid-South college of dentistry. She was born and raised by two parents with a brother on the west coast. Both of her parents have associate degrees and her mother works as a nurse while her father is a stationary engineer. Her brother is currently a pilot for a major distribution company. Growing up, Jennifer attended public school and enjoyed participating in numerous extracurricular activities such as soccer, softball, and Girl Scouts. She also has a history of being academically gifted and skipped a grade in math during middle school and graduated high school in the top 10% of her class.

Jennifer is unique among participants as she is a wife and mother of four. She and her husband met while working in retail during high school and married after she graduated from college. Her husband was in the military but now works as a physician’s assistant. They welcomed their first baby while Jennifer was in dental school which led her to create the dental school’s maternity policy for other women that may become pregnant during their education. She had three of her children when she began residency when they were ages 1, 3, and 6 years old.

As with several other participants in this study, Jennifer was initially interested in medicine, but after shadowing other physicians, realized she did not want the lifestyle that
comes with being on call and working odd hours. She became interested in dentistry after taking a job assessment for a class her freshman year at a public state university that indicated that dentistry would potentially be a good career choice for her. Armed with this information, Jennifer volunteered at a low-income dental clinic where she watched a large abscess be drained and realized that dentistry was the path she truly wanted to pursue.

Although Jennifer knew she wanted to attend dental school following her graduation from college, deaths in her family and moving due to her husband’s job in the military led her to waiting two years to apply. In that time, she worked in an orthodontic office and studied for the DAT (Dental Aptitude Test - required for admission to dental school) until she was finally able to apply to dental schools. Following the initial application review process, she was invited to interview for positions at five dental schools. She selected her dental school as she felt welcomed and supported by the dean of the college during the interview process. While in dental school, Jennifer had no desire to specialize, but did choose to pursue an Advanced Education in General Dentistry (AEGD) residency program to gain more advanced clinical skills. During this residency, she learned numerous surgical procedures such as how to remove impacted third molars, retreat molar root canals and place implants.

Following the completion of her AEGD residency, Jennifer began practicing in a private dental office with another dentist. During her time in this practice, she realized that she preferred when she was able to perform procedures that required finesse and more fine tactile skills over general dentistry procedures such as fillings and crowns. Although she was able to perform many more advanced procedures due to her time in her AEGD residency, she had one patient in practice that required a periodontal surgical procedure that she did not feel comfortable performing due to her limited training in that particular area of dentistry. This
led her to realize that she desired a deeper knowledge of periodontal procedures that she was unable to obtain through routine continuing education courses.

Her interest in and desire to learn more about periodontal surgical procedures persuaded her to apply to periodontal residency programs. While she was late to the application process, she was able to get an interview at the Mid-South college of dentistry after another candidate decided to drop out of the application process. Following her interview with the graduate director and wanting to be closer to family that had moved to the area, Jennifer formally accepted a position in the residency program her first year applying to periodontal programs.

**Themes**

The methodology and methods detailed in Chapter 3, led to three themes: (1) interest to specialize was cultivated through learning experiences, (2) residency is not conducive to family life for women residents, and (3) having a strong support system led to success. As also discussed in Chapter 3, these themes were identified following the fourth and final round of structural coding where I coded segments of data from each participant into specific topics and categories related to my research question and theoretical framework (SCCT). To illustrate these factors during analysis and interpretation, common categories were entered into the overarching SCCT model (Figure 4 in Chapter 5) as was done by Nelson and colleagues (2020) for their research on medical student’s desire to specialize in pediatric pulmonology. These categories were then used create the three themes that will be discussed in more detail in the following sections.
Theme 1: Interest to specialize was cultivated through learning experiences in dental school.

During the interviews and the subsequent coding of the data, I noted that each woman had discussed that they did not have a plan to specialize and entered dental school with the intention to become general dentists. When probed on what influenced them to become interested in specializing, all the participants credited their own learning experiences while in dental school with piquing their interests in their respective specialties. This finding supported SCCT’s view that learning experiences (personal performance accomplishments, vicarious learning experiences, social persuasion, and physiological states), as discussed in more detail in Chapter 2, are critical to developing specific career interests through self-efficacy beliefs (Lent et al., 1994).

Brianna discussed a conversation with a faculty member that persuaded her (social persuasion) to consider specializing when she was on her oral surgery rotation in dental school:

*He [oral surgery faulty member] was like, “Have you ever thought about oral surgery?” I thought he was talking to my classmate... and then he was like, “No, I'm talking to you.” And I was like” Oh, no, I'm not that nearly cut-throat enough for that.” And he was like, “You don’t have to be cut-throat to be an oral surgeon.” And I was like, “Okay, whatever.” But I knew I wasn’t top of my class, and I knew it'd be difficult, but I wasn't even interested at that point. But he made me start thinking about it. (Brianna, Oral Surgery)*

This conversation between her and the faculty member influenced Brianna to believe that it was possible for her to be an oral surgeon which led her to consider oral surgery as a
possibility for her. She decided to pursue more learning opportunities such as two externships at other OS programs that allowed her the opportunity to visit oral surgery programs to gain insight into OS residency. She also attended rotations through the OS department in her dental school where she was able to perform oral surgery procedures and volunteered in community extraction clinics to get a better idea of what she could expect if she entered the field of oral surgery. Her experiences (personal performance accomplishments and vicarious learning) further solidified her interest in oral surgery:

*I did externships and found out I really enjoyed it... I went to the surgeries. I went to the ED [Emergency Department] with them [current residents], went to any lectures that they had, spoke with the residents, spoke with program directors, and just learned more that way... we also did a one-week rotation with our oral surgery program. So, we did go to the OR [operating room] with them and to clinic with them and kind of see what they did... I volunteered in two different extraction clinics in dental school and I loved going... I think that was just a combination of all that is how I learned more about oral surgery.* (Brianna, Oral Surgery)

Violet also discussed how social persuasion was influential to her considering specializing, but unlike Brianna who was encouraged to pursue specializing by a faculty member, Violet was encouraged by a male friend who was a resident in the endodontics program. Like the faculty member that encouraged Brianna, he led her to believe that she had the skills necessary be successful in endo residency:

*... He was like, raving that I was doing really great in the lab and that I should consider doing something with that. And so, I think [he] kind of planted a seed when [he] told me that and then I don't think I decided or was even sure like, maybe I think*
I told my sometime during D2 [second year of dental school] spring that I was like, yeah, I'm kind of like interested in this. (Violet, Endo)

Although both Brianna and Violet talked about how personal persuasion by a mentor led them to become interested in specializing, Billie credited a vicarious learning experience where she was able to personally witness what oral surgery residents do with her interest in oral surgery. During a lecture given by an oral surgery faculty member, a surgical case was discussed that the oral surgery residents had worked on in the emergency department. As with Brianna and Violet, this experience led Billie to seek out more information about oral surgery, her specialty of interest:

*It was probably second year of dental school that I really got interested in oral surgery after a lecture from [Dr. W]. The lecture was pretty basic, pretty benign, oral surgery stuff, but he showed some pictures of the case that they did in the OR [operating room] that they done that week, a trauma case and I just saw it and I was like, that looks like it'd be really cool to do. So, after that I started hanging out with [Dr. W] more, finding out a little bit more about what they [oral surgeons] did and decided I think I think I really liked this. I think I really want to do this and so that point on I started pursuing that route. (Billie, oral surgery)*

Like Billie, Sarah also mentioned that a lecture during dental school led to her considering specializing. Unique to her learning experience, was that the lecturer was a woman periodontist that Sarah described as a “boss ass woman,” indicating that she found this woman to be a powerful representation of a successful woman in dentistry. During our interview, Sarah was physically and emotionally moved when she discussed how this periodontist demonstrated that women in periodontics can be successful, powerful, and
happy. This further emphasized how important it is to have female representation in male-dominated dental specialties which also speaks to vicarious learning experiences:

_ I started shadowing at school and I kind of knew right away...I saw a woman and she started her own perio practice, it's perio/endo. She gave a lecture, and she was just emanating power and femininity and strength, and I said I want to be like her... I saw that boss ass woman. And I said she's doing that, she has kids. She is happy, confident, strong. Boom. That's what got me. Like I vividly, I'm getting chills again, I vividly remember looking at her saying that's what I want to do._ (Sarah, perio)

Two other participants, Candice, and Jennifer discussed how their interest in specializing came from physiological and affective states which are also described in SCCT as specific types of learning experiences. They both recount realizing they preferred and found more joy in learning a specialized skill set beyond general dentistry procedures.

Candice talked about how her experiences during dental school led to her initial interest in specializing when she realized she preferred doing endodontic procedures over other general dental procedures she was also learning:

_ ... I realized that I really enjoyed endo. I had the opportunity to do some dentures and some crown preps and, you know, perio... But ortho was horribly boring... And then I was preparing for boards, and I was having to do crown preps and then also practice endo and I remember thinking, I really don't want to do these crown preps, I really just want to sit here and do this endo all day over and over and over. And there was just something about the preciseness of it, the quietness of it, the cleanliness of it, and there's so many things about it that just appealed to me so much more._ (Candice, endo)
Unlike Candice who knew she wanted to specialize while in dental school, Jennifer mentioned that her experiences working in a private practice for two years are what made her realize that she wanted to specialize. Specifically, she discussed how she didn’t feel like continuing education (CE) courses were providing her with enough of a skill set in the surgical procedures that she enjoyed performing the most:

*It was after working in private practice for a couple years that pushed me into…. I guess it really just boils down to me working for a while and realizing what made me happiest, and recognizing that maybe I might be able to perfect a skill set in a specialized area better than being a general dentist… I was also at the time doing a lot of CE [continuing education] like, I love to learn… I was doing a lot of CE but I just felt like all of these CE courses I were taking were more on the surface… I wasn't getting enough in all my CE. I wasn't getting the like… feel goods for the work I was doing most of the time at work unless I was getting the random surgery case. So that's when I decided. (Jennifer, perio)*

As demonstrated, the women’s interests in specializing were drawn from numerous learning experiences which supports SCCT’s prediction that learning experiences lead to career interests and choices (Lent et al., 1994). Specifically, Briana and Violet both credited mentors with encouraging them through social persuasion to specialize. Billie and Sarah credited vicarious learning experiences through lectures given in dental school with providing them the opportunity to learn about and witness specialists. Candice and Jennifer both discussed how positive affective states influenced their preference for more specialized procedures as they brought them more joy than general dental procedures which led them to consider specializing.
Theme 2: Residency is not conducive to family life for women residents.

Five of the six women interviewed do not have children and the one woman that does have children delivered her first baby while in dental school. Those five women that do not have children all felt that specializing means having to delay having children until they finish residency. SCCT highlights that barriers experienced during choice have an influential impact on career choice through complex, reciprocal linkages with cognitive person factors (self-efficacy beliefs, outcome expectations, and personal goals; Lent et al., 1994). During analysis, this theme of residency not being conducive to family life was identified as being a potential barrier to explain why women may not be entering into dental residencies.

For example, both women who chose oral surgery discussed how they knew that going into residency meant they would need to delay having a family for at least four years. Brianna, the current oral surgery resident, talked about how she made a conscious decision that pursuing residency meant she would need to delay having children:

*Like, do you want to be able to have kids? Is that going to affect that? That is something I had to think about because there are certain years where it's obviously better to have kids, right. I knew going into this that even though I'm single, I would be postponing any hopes of that if that is what I decided. Because to me residency and getting married or having kids, they don't go hand in hand, not as a woman... for me personally, making a decision and knowing that I won't have a family until all this is over, that was just something that I decided for myself.* (Brianna, oral surgery)

Billie, who chose oral surgery but has completed residency also felt that she had to make the decision to delay having a family. She discussed that she was willing to do so
because she was passionate about oral surgery and did not feel that she was ready to have a family at that time in her life.

*I think we’re [women] obviously much more prone and much more apt to want to be at home and have kids and have a family, just in general, and this [residency and oral surgery] is not conducive to that... So, you're delaying that for another four years, potentially longer... I consciously made that choice.* (Billie, oral surgery)

She also reflected on how having a child in residency would have affected the department as a whole, justifying Brianna’s belief that residency required women to delay family life:

*If we had to give somebody six weeks off, we would have drowned because they got pregnant. We would have drowned and that was something I knew going into it, I chose that route. I was choosing not to have a family for until at least I was finished.*

(Billie, oral surgery)

Interestingly, Candice had initially considered oral surgery which, as mentioned in Chapter 2, requires a minimum four-year residency. However, she decided to pursue endodontics which requires two years of residency due to wanting to be able to have a family sooner if she chose to:

*I was actually interested in oral surgery for a time.... but I knew that it was a boy’s club. And I really wanted to have like a family and be able to be a mom and have children and have a flexible schedule. And I knew what that kind of schedule would potentially be like, especially in residency.* (Candice, endo)

Sarah who chose to specialize in periodontics also felt that specializing would mean delaying having children and was concerned about the potential biological implications as a
woman. As stated in Chapter 2, periodontics requires a three-year residency and she said that she knew “it was three years that I can't get pregnant. So, I've been thinking about this a lot now that I'm single, I have a biological clock, and I just delayed that three years. Like, am I screwing myself over?” (Sarah, perio). She was also concerned about the expectations placed on women to have children earlier. She mentioned how “there's so much talk about, like, in dental school, everyone got pregnant fourth year, and they're right away getting pregnant…. and they're like, wow, you can really wait three more years?” (Sarah, perio).

Like Sarah, Violet also mentioned how having a “biological clock” may impact some women’s decision to pursue residency. She discussed how endodontics, which usually requires applicants to practice general dentistry for a few years prior to residency, may dissuade women from considering that specialty:

Maybe some people, they could [pursue residency] if they wanted to but they are just ready to start a family. And, you know, because we do have a biological clock ticking... It's like, if they're already out and having babies and done with school and you have to work four years, then come back, and you've already got kiddos, and I know there are people in my [dental] class with kids. I personally don’t know how they do it. But if I'm gonna have to wait to get in, that could be a big thing. If they can’t go ahead and do it straight out and then already have everything going on.

(Violet, endo)

Jennifer, the one woman that did have children when she decided to specialize, had negative experiences while in residency, supporting the other women’s concerns. For example, some faculty made inappropriate comments that she felt they would not make to her male co-residents:
Definitely comments about like, it's impressive that you can do this [be in residency] and take care of your husband and take care of your kids and your home, and I know you have a lot going on... And I'm kind of like, what the fuck does that mean? I don't have to take care of my husband, he's a grown ass adult, and they're not just my kids, they're our kids... (Jennifer, perio)

She also discussed how faculty had unrealistic expectations on how she should deal with an emergency involving her child:

So, one time, I got called and I had to go home, I needed to go pick up my kid which happens, and my husband works... so he couldn't go leave and pick up the kid... and I got told by one of my attending faculty members that I could not leave because I was supposed to be teaching, and I could not abandon that...

She continued with her thoughts on how she felt that her supervising faculty member could have better handled the situation and how it led her to question her decision to pursue residency:

If somebody's having an emergency and needs to leave like, you [her supervising faculty member] be the leader and figure out a solution to what that person is supposed to be doing... That was another point where I was kind of like, what am I doing here? If you tell me that I have to stay and I'm telling you I have to go pick up my child because something happened to them. (Jennifer, perio)

Consequently, Jennifer’s account of her experiences being a wife and mother while in residency supported the other women’s concerns about having a family while in residency.

Interestingly, the women who were willing to delay having a family until after finishing residency speaks to a more recent article by Lent and colleagues (2000), that
specified that though people may perceive barriers to career choice, they may not be hindered in their occupational pursuits if they see themselves as being equipped to cope with them. This indicates that while the women felt that delaying having a family was a potential barrier to other women entering into dental residencies, it was not necessarily considered an insurmountable barrier to them all and they felt that outcome expectation that residency would eventually lead to a better work/life balance and more happiness in their professional lives enforced their decision to specialize. As hypothesized in SCCT, people are more likely to engage, persist, and succeed in activities when they believe their involvement will lead to positive outcomes (Lent et al., 1994).

**Theme 3: Having a strong support system of family, friends, and mentors led to their success.**

This theme became evident as each woman discussed having a supportive network of people, especially their families, with their decision to specialize and pursue residency. As predicted by SCCT, support systems “facilitate the process of translating one’s interests into goals and goals into actions” (Lent et al., 2000, p. 38). This hypothesis was supported as all the women detailed how having a supportive network of family, friends, and mentors led them to pursue residency.

Brianna and Billie both specifically credit their parents as their biggest supporters. Brianna discussed how her parents’ continued support, encouragement, and sacrifices are a factor in her continued success:

*They're [her parents] very supportive. Education for them, is like number one... They want us [her and her brother] to have the best possible opportunities. Go where we wanted for college, do what we wanted to do, never told us we had to do anything*
specific.... So, my parents have always been very, very supportive. If we wanted to do it, they would help us find a way, provided it was like, going to benefit us in some way, I think... I know they sacrificed a lot for us to go to a private school, both of us, that whole time... I may not have understood that when I was in the private school, but from here looking back, I owe everything to my parents. Not everyone cares that much or even if they care that much, they're not willing to sacrifice that much. And my parents were, and still are. They are very supportive. (Brianna, oral surgery)

Billie, like Brianna, also talked about how her parents constant support and encouragement had a positive impact on her belief that she could specialize:

[My] mom and dad both have been, like my biggest supporters saying, absolutely, if that's what you want to do, then you can do it, no doubt you can do it. And they're very proud of where I'm at now also. ...Especially knowing it hasn't been the easiest and nothing has come necessarily as expected. There's been a couple of setbacks or change of plans, but they've been there the whole way. Supporting and listening when I'm questioning things and hearing me out and giving advice... after listening and trying to understand. (Billie, oral surgery)

Echoing Billie and Brianna, Violet also mentioned that her parents had a profound impact on her developing the confidence she needed to consider specializing. When talking about how she felt unsure of her ability to specialize, she credited her parents with supporting her. She said that “my parents were telling me they had a really great feeling about it, and I was telling them they were being delusional” (Violet, endo).

While Billie, Brianna, and Violet all cited their parents as their greatest supporters, Candice discussed how it was her grandfather’s support that had the biggest impact on her
success. During our interview, she talked about how after being in the job market for several years, she was unsatisfied with the job opportunities that were available to her. She credits a conversation with her grandfather as the catalyst that made her consider changing her career which ultimately led her to dentistry and specializing:

*I wasn’t satisfied and I wanted more. And my grandfather actually, I think probably saw me better than anybody. He was very country by the way, but the thing he finally said to me, where I was like, he sees me is “you've just got a fire under your seat”.

Whatever that means, but I kind of knew what he meant. I was like, he knows that I want to do things and I want to go places and I’m not content to just stay here in the country and be a wife or something. (Candice, endo)

Sarah also credits members of her family with providing the support and encouragement she needed to decide to specialize and pursue a periodontal residency. Specifically, she mentioned that the women in her family had the greatest impact on her:

*My immediate family was very supportive of my decision to specialize. My mother has taught me from day one that I could do anything if I set my mind to it, and I truly believe it. I think about that almost daily when I’m challenged in my day-to-day life. I can absolutely do it. She wants nothing more than for me to be happy and she saw how happy pursuing my passion in perio would make me. She encouraged me and continues to encourage me to this day. My aunt and grandma were also positive pillars of support that helped lessen the stress I felt making such a big life decision. (Sarah, perio)*
The one participant that is married with children recognized her husband as being the most influential support, stating that, “honestly, I don't know how I could have done a lot of it without my husband. He's my biggest support and sounding board” (Jennifer, perio).

Mentors also played a pivotal role in some of these women’s decisions to pursue residency. When asked who she felt her greatest mentor was, Brianna identified one faculty member that she felt was particularly approachable and encouraging to dental students.

*That specific faculty member wanted to get anyone who was interested in surgery more involved. So, if he was doing something with the residents... like, a lecture, you were invited to join. Or we had cadaver heads to do surgical approaches on, really for the residents, but we were invited to come to do that too... He just taught, included us and all of it and so it seemed more approachable and accessible because of that one faculty member and truly, if I hadn't met him I don't think I would have done surgery... I think it had the biggest impact on me was just, meeting that faculty member. (Brianna, oral surgery)*

This was the same faculty member that had first asked her if she had ever considered oral surgery and assured her that she didn’t need to be “hardcore” to be a surgeon, leading her to pursue other learning opportunities in oral surgery.

Candice also credited faculty with sparking her interest and desire to specialize in endo. When asked who her greatest mentor was, she discussed how two faculty members were equally influential in her decision to specialize, a male general dentist, and a female endodontist. When talking about how she was influenced by her mentors, she said, “there's one that's kind of the foundation and the other one was like the steeple, you know, can't really have one without the other” (Candice, endo).
She described the male general dentist that was her direct supervisor in dental school as being her first mentor and “foundation”:

_[He was] so good at everything, at least from my eyes. And [he] was tough, but kind, and was a good communicator and had patience with me. Didn’t ever make me feel bad for being slow or behind. Even when I would go to [him] upset and I would be like, I’m so slow, [he] didn’t make like it was a big deal. And [he] actually, I think probably... [he was] very encouraging about endo._ (Candice, endo)

She also spoke highly of a female endodontist faculty member that encouraged her and mentored her from the time she became interested in endodontics to the time she was in residency. She described her as the “steeple” and said that the:

_female endodontist was huge. As soon as I expressed my interest in endo, she was there every step of the way, trying to get me involved in opportunities to go to meetings. You know, trying to get me involved in things, assisting, hanging out upstairs with the residents, just providing resources. It was pretty much, once I said it out loud, and I had someone that was like, yes, let's do this. It was like, okay, we're gonna do this. And she was pretty much with me every step of the way in terms of applying for residency, being there during residency at least part of the time and helping me get by._ (Candice, endo)

While Brianna and Candice identified faculty members as their greatest mentors, Billie and Violet talked about how other residents in their specialties had the greatest impact on their decisions to specialize. When asked who her greatest mentor was prior to residency, Billie discussed how an oral surgery resident became a mentor to her during her third year in dental school:
[M], he was chief my D3 year. He was extremely encouraging, always let me bug him with questions and watch anything he did in clinic or the OR [operating room]. He always seemed like he was having a good time; you’d never know he’d been up all-night working or dealing with difficult patients. He made it look fun and welcomed me into that world better than anyone else before I started residency. (Billie, oral surgery)

Violet also identified a resident as being a mentor that they could ask questions to prior to deciding to pursue residency:

At some point during the endodontics lab, my friend called me and said I should specialize in endo. She said her husband was going on and on about how well I was doing in the lab. I knew endodontics came naturally to me, but I didn’t realize any professors or residents thought I was doing above average work. I already knew I liked it, and I felt like that was the encouragement I needed to consider specializing in it. It also helped that I could ask them questions whenever I had any. (Violet, endo)

This resident was also the friend who had first complimented Violet’s clinical skills in an endo lab which led to her to become interested in pursuing an endo residency.

All of the women credited their family and mentors with their interest and decision to pursue specializing. Billie, Brianna, and Violet all specifically mentioned their parents as being their biggest supporters while Candice gave credit to her grandfather as the supporter that had the biggest impact on her decision making. Sarah also discussed her family and specifically pointed out that the women in her family, in particular, had the greatest impact on her.
While all the women credited family with helping them in their decision and belief in themselves to specialize, Brianna and Candice discussed faculty mentors and being particularly influential. Billie and Violet also felt that mentors were impactful to them, but discussed how it was residents already in programs, and not faculty, that led them to pursue a residency. These finding correspond with the emphasis SCCT places on having ample support in the process of career interest development and choice (Lent et al., 1994).

**Chapter Summary**

This chapter outlined my analysis and interpretation of the data collected through participant’s prompted journaling and interviews based on the research question: What influences women to become interested in and ultimately choose a male dominated dental specialty? The first section provided participant vignettes to provide more context to the analysis that followed. This analysis considered the ideals present in feminist research along with SCCT as a framework to identify three themes: (1) interest to specialize was cultivated through learning experiences in dental school, (2) residency is not conducive to family life, and (3) having a strong support system led to success. Chapter 5 will provide a detailed discussion of the implications, limitations, and recommendations for future research.

**Chapter 5: Discussion and Conclusion**

This study used a feminist approach and SCCT as a guide to answer the research question: What influences women to become interested in and ultimately choose a male dominated dental specialty? This chapter begins with a discussion of the feminist perspective and theoretical framework of SCCT that guided this study. What follows is a discussion of how this perspective and framework along with the data and findings connect with the existing literature followed a presentation of the significance of this study. The chapter
concludes with the limitations and recommendations for future research that can be taken from this study.

**Theoretical Perspective Guiding the Study: Feminism**

As discussed thoroughly in Chapter 2 of this dissertation, a feminist perspective was used to make methodological choices that would honor the women’s experiences who participated in this study. As detailed in Chapter 3, case study as a methodology aligns well with the feminist framework of this research (Reinharz, 1992) and has been used to understand women’s experiences and how interactions impact interests and actions (Bhattacharya, 2017). Thus, approaching this topic through case study allowed me to explore a very specific and bounded group of women who have chosen to pursue a male-dominated dental specialty.

The methods used in this study were also true to the feminist approach utilized in this research. Researcher journaling allowed me to constantly reflect on how I constructed knowledge with my participants as well as helped me to remain reflexive throughout the entire process (Kelly, 2020). Interviews, which is also a method commonly used by feminist scholars, allowed for the women to speak of their personal experiences and co-construct meaning through their perspectives (Reinharz, 1994).

As a feminist scholar, it was also important for me to note my position in relation to this research which was accomplished through my positionality statement in Chapter 3. The relationships I had prior to this study are acknowledged in the participant vignettes in Chapter 4.

The analysis, representation, and explicit interpretation of the data were also influenced by feminism as the intrinsic qualities of the individual, in this case, gender,
influences all aspects of the SCCT choice model (Lent et al., 1994) which is discussed in detail in the following section.

**Theoretical Framework Guiding the Study: SCCT**

SCCT was used as the guiding framework throughout the design and implementation of this study. As developed by Lent and colleagues (1994), social cognitive career theory seeks to explain three interrelated aspects of career development: (1) how career interests are formed, (2) how career choices are made, and (3) how career success in a chosen field is obtained, and therefore provided the ideal framework to explore the research question: why do women become interested in and chose a male-dominated dental specialty?

For this study, SCCT was used to compose the interview questions and journal prompts. Interview questions were structured to probe how women view their clinical and interpersonal abilities in dentistry along with their initial and current expectations for their careers. Data collected from interview and journaling were coded four times with the final round of coding utilizing a structural approach where the interview transcripts and journal entries were coded based on the research question.

The choice model with SCCT, which seeks to help explain the career choices, was then used to identify themes based on how specific factors such as perceived barriers and supports, environmental influences, and learning experiences impacted the women’s self-efficacy beliefs and outcome expectations leading to their interest and choice to specialize. To illustrate these factors during analysis and interpretation, common themes were entered into the overarching SCCT model as was done by Nelson and colleagues (2020) for their research on medical student’s desire to specialize. My adaptation of the findings of this study
within the choice model is illustrated in Figure 4 which depicts the complex interplay between all the variables. Figure 4 is discussed in more detail in the following section.

Figure 4

Social Cognitive Career Theory applied to women dentists who choose to specialize in a male-dominated dental specialty.

Discussion

The primary intrinsic quality (Figure 4, Box 1) of the participants that was of particular interest in this feminist study was gender. Box 3 of Figure 4 lists supports and barriers that were unique to the women due to their gender. Supports included the financial implications of specializing, such as being able to support themselves better financially and still have a flexible work schedule and work/life balance. Common barriers discussed were that women that dental residencies are not conducive to having children or a family while in school. These barriers were in support with an older study by Barr and colleagues (1992) where it was noted that women found their dental residencies were inflexible for their childcare needs.

Most of the women in this study also mentioned that they knew that deciding to specialize meant having to delay having a family which due to their “biological clocks” meant waiting two-to-four years longer to become pregnant. The one woman who had children and a family prior to, and during residency, further supported this notion as she had several negative experiences and inappropriate comments made to her by faculty during her residency. This finding was consistent with a study by Uppgaard (2018) that also found that a woman in a male-dominated residency program also had inappropriate comments made to her by faculty members. All the women mentioned that these factors likely impact why some women may not chose to pursue specializing as these qualities can lead to inherent barriers around family planning and time commitment.

Figure 4, Box 2 then highlights background environmental influences that helped to shape learning experiences and interest in specializing. The influences included being exposed to numerous dental specialties while in dental school and having support from
family and friends. In fact, many of the women specifically mentioned that they were always supported by their families and made to feel that they could accomplish anything regardless of gender. This is consistent with the SCCT hypothesis that career interests are shaped through opportunities for task exposure and skill development and role-model support. The findings of this study also support the assumption that interests exert their greatest influence on career choice under supportive environmental conditions as all of the women had supportive family, friends, and mentors (Lent et al., 1994).

Figure 4, Box 4 lists several learning experiences that the women credited with sparking their interest in specific specialties which ultimately led to their decision to enter into a male-dominated dental specialty. As hypothesized by Lent and colleagues (1994), learning experiences help shape self-efficacy beliefs and outcome expectations which give rise to choice goals and actions. Specific learning experiences included opportunities for shadowing, watching specialized procedures being completed in a clinical environment, participating in volunteer opportunities, and having first-hand experience in both general dentistry as well as specialized procedures. These experiences led the women to having high self-efficacy beliefs and positive outcome expectations further strengthening their interest in and desire to pursue residency.

According to Lent et al. (2000), self-efficacy beliefs and outcome expectations are primarily derived from these learning experiences through four primary influences: performance accomplishments, vicarious experience, social persuasion, and emotional arousal. Figure 4, Box 5 lists several of the self-efficacy beliefs that were cultivated through these unique forms of learning experiences. For example, many of the women credited witnessing other women succeed in their specialty (performance accomplishments) with
them feeling as though they can also be successful. They also discussed how observing faculty and residents as their role models (vicarious learning) and being encouraged by mentors, family, and friends (social persuasion) were impactful in forming positive self-efficacy beliefs that they too, could specialize. All of the women also mentioned that their chosen specialty brought them more joy and happiness that general dentistry (physiologic cues). These findings have not yet been reported in the literature due to the limited nature of studies on women in dentistry who decide to specialize.

The women all credited similar outcome expectations with helping them make the choice to specialize. These outcome expectations are illustrated in Figure 4, Box 6 and included that they believed that their specialty would lead to a more flexible schedule and better work/life balance than what is usual in general dentistry. This finding is consistent with the work of Gallagher and colleagues (2009) that found that these specific outcome expectations (flexible schedule and work/life balance) played a role in dental student’s desire to specialize. Che Musa et al. (2016) also found in their research that achieving financial stability was an outcome expectation that influenced students’ interest in specializing. All the participants in this study also discussed how they anticipated that they would enjoy being a specialist more than a general dentistry as they found the procedures more interesting and challenging which had not been reported in the literature previously.

Lent and colleagues (2002; 2006) also postulate that people are more likely to develop interests in an activity and succeed in tasks which they believe they will lead to positive outcomes as determined by their self-efficacy beliefs and outcome expectations (Figure 4, Box 7). As was found in a study conducted by Caesarani and colleagues (2021), the results of this study are also consistent with this hypothesis as the women’s positive self-
efficacy beliefs and outcome expectations led to their initial interest in and eventual goal to become a specialist (Figure 4, Box 8).

**Significance of the Study**

This study is unique in that it uses a qualitative methodology to focus on women’s experiences in becoming dental specialists. It provides a rich context in which these women explained how they became interested in the dental specialties they eventually chose for a career. However, these women remain underrepresented in regard to gender in these specialties. A review of the literature revealed significant gaps in previous research relating to women in dental specialties with the majority of the limited studies tending to take a quantitative survey approach. Studies that also use SCCT to focus on dentistry are also severely lacking with literature specifically dedicated to better understanding women’s dental career interests and choices being nonexistent.

Also relevant to this study is that women have now achieved equity in regard to dental school admission with the 2018 entering class having had more women enrolled in dental school than men (American Dental Education Association, 2018) although women in certain specialty programs continue to remain significantly underrepresented in regard to gender. Specifically, the three dental specialties of endodontics, oral surgery, and periodontics where the number of women enrollees are 43.8%, 20.3%, and 47%, respectively (American Dental Association Health Policy Institute, 2022).

These factors are particularly significant in that, as discussed in Chapter 1, studies have shown that some dental patients prefer a gender-concordant oral health provider (Bender, 2007), are more comfortable having certain discussions with women providers in dental settings (Daley et al., 2021), and that patients of both genders perceive female dentists as
more likely to help them feel relaxed and take time to discuss their concerns (Smith & Dundes, 2008). This study explores the experiences that lead women to these careers which can benefit patients that may prefer a female dental provider for their specialized care.

The lack of literature on this topic and the benefit that women dental specialists can provide to patients emphasizes the need for this work in the dental and education fields. The information gleaned from this study can be used to inform dental schools and residency programs of how to interest women in male-dominated specialties and provide the support that is necessary to allow them to pursue residency opportunities. This study also helps to fill the gaps in the literature on women in dental specialties and can be used as a template for other qualitative studies focused on women in dentistry.

**Recommendations Based on this Research**

This study is the first of its kind to highlight why women became interested in and chose male-dominated dental specialties. The recommendations drawn from the results of this study are three-fold: (1) women should be afforded supportive maternity leave policies (2) women should be exposed to multiple dental specialties early and throughout dental school, and (3) women mentors should be made available in positions where they can be seen by women still in dental school.

First, it is important that women in dentistry be afforded supportive maternity leave policies should they decide to pursue residency programs and become pregnant. The Commission on Dental Accreditation (CODA, 2022d) is the accrediting body responsible for reviewing the resources, curriculum, policies, and operational standards for dental programs. As such, they do not currently have a requirement for advanced dental programs to provide maternity/paternity leave to residents.
According to the Mid-south college of dentistry’s website (not cited due to ethical concerns), there is no maternity/paternity policy in place and the university does not recognize a Leave of Absence, including for pregnancy and/or delivery. As stated in the online college handbook, “prolonged absences may result in, withdrawal, a requirement to repeat a significant portion of the program and/or to petition for readmission,” creating hardships for women who may wish to become pregnant and have children while pursuing residency.

A study conducted by Diaz et al. (2021) further illustrates the lack of maternal/paternal leave policies in advanced dental education. They conducted a survey of 220 residents concerning maternal/parental leave and the lack of formal maternity/paternity policies in their oral surgery programs. They found that 77% of respondents were either not aware of a maternity/paternity policy or that no policy was in place. They also found that the residents that did report having children while in residency had an average leave time of only 1 to 2 weeks which they cited was possibly due to residents being required to have extension of OMS training to meet CODA requirements. This is due to OMS programs, specifically, having rigorous time requirements over a minimum four-year period for residents where they must be present in training (Commission on Dental Accreditation, 2022). This study also found that 77% of respondents supported paternal leave policies, underlying the need and desire for these policies to be in place for women who chose to have children while in residency.

One potential recommendation to mitigate these challenges could be for programs to offer more flexible part-time training options. While no research has been conducted on offering flexible residency schedules for dental students, a study conducted by Piotrowski
and colleagues (2018) developed a survey to determine if medical students would be interested in flexible residency training options. They found that the most common reason for interest in part-time residency options was “more time with children/have children earlier” and concluded that offering flexible training options could be effective in recruiting students in residency programs. They also found that interest in part-time training is significantly higher among women, indicating that some woman would be willing to extend their time in residency. This further highlights the potential to offer dental students and residents more options for training schedules that better support women who have children, or desire to have children, while in residency.

A second recommendation is for women to be exposed to multiple specialties early and throughout dental school. As highlighted in this study, the women credited being made aware of multiple dental specialties and what they entail inspired them to become interested enough to seek out more learning experiences. This is consistent with findings from other studies that explored factors that influence dental students to become interested in specializing (Dhima et al., 2011; Marti et al., 2020; Wendling et al., 2022). For example, it might be helpful for students to have required rotations where they are able to learn more about specialists early in their dental education and those interested in specializing should be given opportunities to shadow and assist practicing specialists clinically within their dental schools or broader communities.

A final recommendation would be for there to be more women mentors in positions where they can be seen by women still in dental schools. As discussed by many of the participants, representation matters, and women in dental school are often inspired by seeing other women succeeding in male-dominated dental specialties. This could be accomplished
by creating mentorship programs as was done by the Resident Organization of the American Association of Oral and Maxillofacial Surgeon (ROAAOMS) to increase the numbers of women in OS (Graves & Weyh, 2022). This free program matched current female OS resident mentors with female dental students to provide access to female mentors in OS. Over the first year of its implementation, the program has grown in numbers of applications from mentees, indicating the program’s success and necessity. While the authors concede that the long-term implications of this program are not clear, they hope this mentorship program will recruit more women into OS, which in turn, will create more possible mentors (Graves & Weyh, 2022).

Programs of this type could and should also be implemented in the male-dominated specialties of endodontics and periodontics. While the article by Graves and Weyh (2022) did not specify how this mentorship program was implemented (for example, by phone, in person, or online), an article by Durbin and colleagues (2020) provides a possible blueprint and offers a “perspective on the use of information communication technologies (ICTs) as a means to challenge gender inequalities in the provision of mentoring, via an online platform” (p. 216). In this paper, the authors discuss how UK professionals in the aviation and aerospace industry (a male-dominated industry) created an online mentoring platform to connect professional woman employed in the industry with mentees in an effort to facilitate interactions regardless of geographic boundaries. While the design of this platform was beyond the scope of the article, the authors did mention that the platform was designed and implemented by the professional body of the industry. The same may be argued that a similar platform could be implemented by professional organizations in dentistry.
Limitations

One potential limitation of this study is that although the findings may be transferable to researchers interested in studying similar research questions (Marshall & Rossman, 2016), they are not generalizable to every woman in male-dominated residency programs across the country. This is due to the specific participant criteria of this bounded case study which focused on a very select group of women in one dental college in the Mid-south. For example, the lack of racial and ethnic diversity of the participants leaves out valuable experiences of other women from different racial and ethnic backgrounds that are also present in various residency programs across the country. This is partly due to the lack of racial and ethnic diversity present in these residency programs as reported in the 2021-2022 Survey of Advanced Dental Education, illustrated in Table 2. (American Dental Association Health Policy Institute, 2022).

Table 2

Percentage of Women in Male-dominated Dental Specialties by Race and Ethnicity

<table>
<thead>
<tr>
<th>Type of Program</th>
<th>White</th>
<th>Black or African American</th>
<th>Hispanic or Latino</th>
<th>American Indian or Alaska Native</th>
<th>Asian</th>
<th>Native Hawaiian or other Pacific Islander</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endodontics</td>
<td>40%</td>
<td>4.3%</td>
<td>9%</td>
<td>0.5%</td>
<td>33%</td>
<td>0%</td>
</tr>
<tr>
<td>Oral and Maxillofacial Surgery</td>
<td>54%</td>
<td>4.7%</td>
<td>11%</td>
<td>0.4%</td>
<td>25%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Periodontics</td>
<td>46%</td>
<td>4%</td>
<td>8%</td>
<td>0%</td>
<td>27%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Another potential limitation is the very specific location in which this study was conducted. The south remains generally more socially conservative than the rest of the
country and has cultural traditions whereby traditional gender roles still take prominence in many institutions ("Southern United States," 2023). These views likely translated into how the women from the south and those embedded into southern culture from other parts of the country viewed their experiences.

**Future Research**

Recommendations for future research include exploring different cases of women in male-dominated dental specialties throughout the country beyond one dental school in the mid-south. As reported by CODA (2024) there are currently 56 endodontics programs, 101 oral surgery programs, and 57 periodontics programs, offering plenty of opportunities to expand research to other schools and programs. It is especially important for future research efforts to take a more intersectional approach to exploring how race and ethnicity also impact women’s dental career interests and choices. As was demonstrated in Table 2, while there are less women of color in endo, perio, and oral surgery, they are still represented and could be approached to better understand how their unique experiences and viewpoints have impacted their career interests and choices.

Other future research efforts could also focus on why women have achieved equitability in some specialties in regard to gender, such as in pedodontics and orthodontics (American Dental Association Health Policy Institute, 2022). This research could be helpful in better understanding the specific systematic supports and policies that are unique to these specialties that compels women to pursue some of them over those that remain male-dominated.

Finally, future research efforts should also focus on mentorship programs, such as those discussed by Graves and Weyh (2022) and Durbin and colleagues (2020) in the
recommendations section of this chapter. Such research initiatives should be action driven and focused on designing an online mentoring platform specific to dentistry. Following the implementation of such a platform, further research could be focused on the effects of these programs on the numbers of women entering male-dominated dental specialties.

**Chapter Summary**

This chapter began with a discussion of the feminist perspective and theoretical framework (SCCT) that guided all aspects of this study to answer the research question: What influences women to become interested in and ultimately choose a male dominated dental specialty? What followed was a discussion of how this feminist perspective and SCCT were used to connect the data and findings with the existing literature. The next section detailed why this study is significant, followed by the limitations and recommendations for future research that can be taken from this study.
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https://doi.org/10.1016/j.joms.2019.08.019
Volunteers Wanted for a Research Study

Women's Perspectives on Their Own Interest and Career Development in Male-dominated Dental Specialties

The purpose of this research is to understand how personal experiences shaped career interest and choice of six women who have entered into one of three dental specialties (i.e., periodontics, endodontics, and oral surgery) that are traditionally dominated by men.

Participants must be current residents or have graduated from their residency program within the past 7 years of the University of Tennessee Health Science Center.

This research will take place in a private setting reserved by the researcher in Memphis, TN or via a secure Zoom meeting depending on the participants location and comfort. Interviews are expected to last 1-2 hours and participants will be asked to participate in some prompted journaling for this study.

For more information, contact Rachel Hamilton at 731-616-4196 (call or text) or at rhmlton6@mem.edu.

This research is conducted under the supervision of Dr. Yeh Hsueh in the Department of Educational Psychology and Research at the University of Memphis.
Appendix B: Consent for Research Participation

Consent to Participate in a Research Study

WHY WOMEN BECOME INTERESTED IN AND CHOOSE MALE-DOMINATED DENTAL SPECIALTIES: A LOOK THROUGH SOCIAL COGNITIVE CAREER THEORY

WHY ARE YOU BEING INVITED TO TAKE PART IN THIS RESEARCH?

You are being invited to take part in a research study about what influences women to become interested in and choose male-dominated dental specialties. You are being invited to take part in this research study because you are a woman who is either currently pursuing or have already completed a male-dominated residency in endodontics, oral surgery, or periodontology. If you volunteer to take part in this study, you will be one of about six people to do so from a college of dentistry in the mid-south.

WHO IS DOING THE STUDY?

The person in charge of this study is Rachel Hamilton of the University of Memphis Department of Educational Psychology and Research. She is being guided in this research by Dr. Yeh Hsieh. There may be other people on the research team assisting at different times during the study.

WHAT IS THE PURPOSE OF THIS STUDY?

By doing this study, we hope to learn what influences women to become interested in and choose the male-dominated dental specialties of endodontics, oral surgery, and periodontics.

ARE THERE REASONS WHY YOU SHOULD NOT TAKE PART IN THIS STUDY?

The only way you could be excluded from volunteering for this study is if you do not fit the inclusion criteria of being a woman who is either currently pursuing or have already completed a male-dominated residency in endodontics, oral surgery, or periodontology.

WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST?

The research procedures will be conducted at a location of your choosing in a private room in a public library or on campus in Memphis, Tennessee or via a secure, password protected Zoom link. You will need to come to the location of your choosing or log into a Zoom meeting one time during the study. This visit or Zoom meeting will take about one-to-two hours. The total amount of time you will be asked to volunteer for this study is anticipated to be between two-to-three hours over the next one month.

WHAT WILL YOU BE ASKED TO DO?
In September 2023, you will be asked to participate in one, recorded, semi-structured interview at a location of your choosing in a private room in a public library or on campus in Memphis, Tennessee, or via a secure, password protected Zoom link. You will also be asked to participate in prompted journaling over a two-week period on your own time in September 2023.

You can skip any interview questions or journal prompts at any time for any reason.

**WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?**

To the best of our knowledge, the things you will be doing have no more risk of harm than you would experience in everyday life.

However, you may find some questions we ask you to be upsetting or stressful. If so, we can tell you about some people who may be able to help you with these feelings.

Social risks include alterations in relationships with others that are to the disadvantage of the subject, including loss of respect of others, labeling a subject in a way that will have negative consequences, or in some way diminishing those opportunities and powers a person has by virtue of relationships with others.

You may also experience inconvenience and possible loss of privacy and confidentiality associated with participating in a research study.

In addition to the risks listed above, you may experience a previously unknown risk or side effect.

**WILL YOU BENEFIT FROM TAKING PART IN THIS STUDY?**

You may not get any personal benefit from taking part in this study. However, it is possible that you may feel benefit from reflecting on and clarifying your feelings and thoughts about your career development and professional choices.

**DO YOU HAVE TO TAKE PART IN THE STUDY?**

If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any benefits or rights you would normally have if you choose not to volunteer. You can stop at any time during the study and still keep the benefits and rights you had before volunteering.

**IF YOU DON’T WANT TO TAKE PART IN THE STUDY, ARE THERE OTHER CHOICES?**

If you do not want to be in the study, there are no other choices except not to take part in the study.

**WHAT WILL IT COST YOU TO PARTICIPATE?**
There are no costs associated with taking part in the study.

**WILL YOU RECEIVE ANY REWARDS FOR TAKING PART IN THIS STUDY?**

You will not receive any rewards or payment for taking part in the study.

**WHO WILL SEE THE INFORMATION THAT YOU GIVE?**

We will make every effort to keep private all research records that identify you to the extent allowed by law.

Your information will be combined with information from other people taking part in the study. When we write about the study to share it with other researchers, we will write about the combined information we have gathered. You will not be personally identified in these written materials. We may publish the results of this study; however, we will keep your name and other identifying information private.

We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information, or what that information is. Measures we will take include:

- Conducting the research in private settings.
- Collecting and storing data on the researcher’s University of Memphis OneDrive with is password protected.
- Redacting identifying information from recordings, transcripts, and other documents.
- Destroying interview recordings immediately following interview transcription and analysis.

We will keep private all research records that identify you to the extent allowed by law. However, we may be required to show information which identifies you to people who need to be sure we have done the research correctly; these would be people from such organizations as the University of Memphis.

**CAN YOUR TAKING PART IN THE STUDY END EARLY?**

If you decide to take part in the study, you still have the right to decide at any time that you no longer want to continue. You will not be treated differently if you decide to stop taking part in the study.

The individuals conducting the study may need to withdraw you from the study. This may occur if you are not able to follow the directions they give you, if they find that your being in the study is more risk than benefit to you, or if the agency funding the study decides to stop the study early for a variety of scientific reasons.

**WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS, CONCERNS, OR COMPLAINTS?**

Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions, suggestions, concerns,
or complaints about the study, you can contact the investigator, Rachel Hamilton at 731-616-4196 or rhmlton6@memphis.edu or Yeh Hsueh at yehsueh@memphis.edu. If you have any questions about your rights as a volunteer in this research, contact the Institutional Review Board staff at the University of Memphis at 901-678-2705. We will give you a signed copy of this consent form to take with you.

_________________________________________  __________  
Signature of person agreeing to take part in the study  Date

_________________________________________  
Printed name of person agreeing to take part in the study

_________________________________________  __________  
Name of [authorized] person obtaining informed consent  Date
Appendix C: Semi-Structured Interview Guide

Date
Pseudonym: ____________________________________________________ (Age: _____)
Racial Identification: Start time:
Occupation: End time:
Attire

Setting (Location)

Other Preliminary Observations [Body language, etc.]

Guided Questions for Interview

(1) How would you describe yourself?
(2) How would you describe your family?
   - Jobs/careers
   - Education level
(3) How would you describe your upbringing?
   - SES
      - Did you grow up in a higher or lower SES?
      - Were you required to work to help support your family?
   - Education
      - What type of school did you attend?
         - Traditional public
         - Private
         - Montessori
         - Home-schooling
      - How did your education impact your decision to pursue dentistry?
      - About where did you rank in your high school upon graduation?
      - Where did you attend college for undergraduate?
         - What was your GPA upon graduation?
   - Opportunities for extracurricular activities
   - Family dynamics
      - Education level of parents
      - Parental support
(4) What initially attracted you to dentistry?
   - Who were your role models and how did they impact you?
   - Tell me about the process of applying to dental school
   - What were your initial anticipations of entering into this profession.
(5) Tell me about dental school.
   - Where did you attend dental school?
   - What were your primary goals when you entered dental school?
      - Did you achieve them?
- Explain how you did/didn’t
  - Did they change?
    - If so, how?
- What factors influenced you to choose the dental school you attended?
- Who was your greatest mentor and how did they impact your experiences?
- What did you struggle with the most during dental school?
  - Personally
  - Academically
  - Clinically
- What did you find the easiest?
  - Personally
  - Academically
  - Clinically
- How did these experiences impact your choice to specialize?

(6) Tell me about when you first realize that you were interested in specializing
- What specialty were you initially interested in?
  - Why?
- What did you choose?
  - Why?
- What specific factors influenced you?
  - Money?
  - Family?
  - Security?

(7) How do you define and understand “gender?”
(8) Tell me about residency
- Did you realize you were in a male-dominated specialty?
- How many coreidents did you have?
  - How did they identify?
    - Gender
    - Race/ethnicity
- What did you struggle with the most during residency?
  - Personally
  - Academically
  - Clinically
- What did you find the easiest?
  - Personally
  - Academically
  - Clinically

(9) Who was your most influential mentor?
- Why?
(10) Did you ever feel like your gender was a help or a hindrance during residency?
- If so, how?
(10) How would you describe your mental health?
- During dental school?
- During residency?
- For example:
- Depression
- Anxiety
- Fatigued
- Strong-willed
- Resilient
- Composed

- How has this helped or hindered your educational and professional pursuits?

(11) Why do you think there are less women in your specialty?
- What would you suggest improving the numbers of women pursuing your specialty?
- How do your personal experiences speak to why there are less women in your specialty?
- Do you feel that your specific residency program is supportive of women?
  - Why or why not?
  - Would you choose the same program again?
    - Why or why not?

(12) Overall, are you happy with your decision to enter into the dental profession and specialize?
- Why or why not?
  - If not, what would you rather do?

(13) Is there anything else you would like to tell me about your initial interest in and choice to specialize?

(14) Is there anything you wish I would have asked during this interview but didn’t?
Appendix D: Participant Journal Prompts

1. Discuss one of your goals when entering dental school and if/how you achieved this goal.

2. Discuss the most impactful experience that led you to become interested in your specialty. (clinical, lecture, personal experience outside of school…)

3. Detail any specific learning experiences that were the most impactful to you choosing your residency.

4. Discuss the supports and barriers you experienced when applying to residency programs. (within your dental school, family, friends, classmates, financial, time, etc.)

5. Discuss how your successes in dental school led you to apply to residency programs.

6. Discuss how being a women may have influenced your interest in and choice to pursue your career.

7. Discuss how your dental school helped or hindered your belief that you could succeed in your specialty.

8. Describe a time where you were unsure if you made the right career choice.

9. Did you ever feel that certain people did not believe in your abilities to specialize? Is so, discuss.

10. Discuss how other people impacted your interest in and choice of your specialty. (mentors, other classmates, family…)
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Yeh Hsueh

Institution Name

University of Memphis

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Appendix F: IRB Approval

Institutional Review Board

Division of Research and Innovation Office of Research Compliance University of Memphis
315 Admin Bldg
Memphis, TN 38152-3370

September 12, 2023

PI Name: Rachel Hamilton Co-Investigators:
Advisor and/or Co-PI: Yeh Hsueh Submission Type: Initial
Title: Women's Perspectives on Their Own Interest and Career Development in Male-dominated Dental Specialties IRB ID: PRO-FY2023-444

Exempt Approval:
The University of Memphis Institutional Review Board, FWA00006815, has reviewed your submission in accordance with all applicable statuses and regulations as well as ethical principles.

Approval of this project is given with the following obligations:
1. When the project is finished a completion submission is required
2. Any changes to the approved protocol requires board approval prior to implementation
3. When necessary submit an incident/adverse events for board review
4. Human subjects training is required every 2 years and is to be kept current at citiprogram.org.

For any additional questions or concerns please contact us at irb@memphis.edu or 901.678.2705
Thank you,
James P. Whelan, Ph.D. Institutional Review Board Chair The University of Memphis.