Barriers To Men Entering Undergraduate Dental Hygiene Programs

Thesis

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Abstract

Dental hygiene has long been a female dominated profession with low gender diversity and no significant increases in male dental hygienist students in decades. Yet evidence shows how diversity can enrich the educational experience and curricula can best be taught in a richly diverse intellectual and social environment. It is time that we start to look at barriers to men in the profession, so in the future we can break down these barriers and increase the gender diversity of the dental hygiene profession. This study is meant to explore and identify barriers that may limit males from entering undergraduate dental hygiene programs while also determining whether females and males opinions differ on whether these barriers exist. This was achieved by interviewing male and female first year undergraduate dental hygiene students through the examination of their thoughts, perceptions, and experiences of the dental hygiene profession both before and after they entered their dental hygiene programs. Interviews of 5 male students and 4 female students were transcribed and analyzed to show if any comparisons could be made. Differences between male and female participant’s responses were evident in the interviewing process, specifically in the male student’s experiences before and after they entered their dental hygiene programs. It is through these differences and perceptions of the dental hygiene profession by male students in the study that we can begin to understand what barriers men face entering dental hygiene. Barriers such as female imagery in the profession, stereotypes, public perception, gender discrimination, lack of male role models, isolation in their program, visibility within their program, fear of the unknown, and history of female dominance in the profession can all be identified throughout the interviews. More research is required to confirm or deny that these
barriers exist and whether they have an impact on male undergraduate students and their entry into dental hygiene programs.
Dedication

This document is dedicated to four very special people in my life who supported me, gave me courage, and never gave up on me throughout this long and arduous journey. I could not have finished this research paper without my fantastic and loving wife Rachel. She stood by my side throughout this whole process encouraging me to keep going and offering support when I needed it most. My father and my grandparents are perhaps the only reason why I was able to accomplish this dream. Their unwavering kindness and continued support in my educational goals are the reason I was able to achieve this goal.

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Fields of Study

Major Field: Dental Hygiene
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Chapter 1: Review of Literature

Introduction

Men have often excelled and been successful in the medical field, however certain disciplines remain relatively inaccessible to males. The dental hygiene field is historically known for its dominance of women in the profession with very little increase of males accepted into hygiene programs throughout the history of the profession. Research focused on barriers males may face entering dental hygiene programs and why the dental hygiene profession continues to have a large percentage of women is almost nonexistent. Nursing has a similar history with a majority of females presiding in their profession, yet nursing has been in existence for much longer than dental hygiene. This history makes nursing literature important when focusing on why dental hygiene has not become more open to males. With little research and literature done on what is preventing more males from entering the dental hygiene profession, we are left with little help finding ways to attract more males to the dental hygiene profession. Identifying barriers that exist within our profession will allow us to understand what if any reasoning is behind such a low increase of males in the profession through the years. When we identify certain barriers, we are able to fix possible problems within the dental hygiene profession’s infrastructure that will allow for increased male entrance and participation in the field of dental hygiene.

This review of literature is aimed at exploring barriers that exist which limit the amount of men entering the female-dominated dental hygiene field. Literature reviewed on the PubMed and CINAHL databases with key word searches of “men in dental hygiene, men and dental hygiene, and male dental hygienists” yielded only 4 articles related to this topic. Due to this shortage of literature on men in dental hygiene, literature from similar health related fields with low gender diversity in their professions was
required. The nursing profession offered the best comparison with a similar history of males in the profession, so literature was also collected through searches on PubMed and CINAHL for “men in nursing, men and nursing, and Male nurses.” Information regarding statistics of males in the field of nursing and dental hygiene will be discussed. Barriers to men entering the dental hygiene and nursing professions will be reviewed and assessed.

Men in the Profession

In the 2000-2001 academic year 97.3% of the 12,629 dental hygiene students were female. The numbers from 2005-2006 indicate that 97.1% of the 13,938 students were female. The 2007 U.S. Bureau of Labor Statistics reported 99% of working dental hygienists were female. Recent statistics show 4.2% of dental hygiene students in 2012-2013 were male and in 2014-2015, 3.7% of dental hygiene student graduates were male. These numbers indicate very little gender diversity in the dental hygiene profession and over the past 15 years male students in the profession have only risen by about 1.5%. Very similar numbers exist within the nursing profession, where males represent a very small portion in the nursing field. It has taken 30 years for the number of male nurses to increase from 2.7% to 5% of the nursing population. In 1992 the number of male nurses leaving the undergraduate nursing program was 2% and has risen to 7%, indicating potential barriers that may exist to recruitment and retention of male students in the undergraduate nursing programs. The 2010 Bureau of Labor Statistics show men still represent fewer than 10% of registered nurses licensed since 2000. Although roughly half the population is male, in 2008, only about 7% of the RN workforce was male. The literature provides these figures showing the lack of males in the dental hygiene and nursing professions over the last 25 years, indicating little change over time and possible problems with gender diversity within the two professions.

Recurring Themes

The literature has presented multiple recurring themes to why men have faced
Some literature portrays these recurring themes as possible barriers, while others just state that they might be reasons that prevent more males from joining the profession. The recurring themes that are presented in the literature are history of men in the profession, gender discrimination, stereotypes, fear of the unknown, role models and isolation, language/imagery in the profession, and being visible/invisible. Interviews with male nurses and male dental hygienists list multiple accounts where men have described these themes having an effect on themselves or other males in their profession. There are several studies that outline the possible reasons or barriers to men entering the field of dental hygiene or the field of nursing.

**History of Men in the Profession**

The history of the dental hygiene profession offers an entire overview and timeline of what has happened over the years within the profession. The literature focuses on where men fall on that timeline and describes what influences dental hygiene history might have on the male population. In 1915, the first legal definition of dental hygiene practice recorded in Connecticut read: Any registered or licensed dentist may employ women assistants who shall be known as dental hygienists. Early definitions of the dental hygienist represent gender inequality and a total lack of gender diversity from the birth of the dental hygiene profession. A job exclusively designed for women as stated in the definition and a historical barrier to future males looking to join the profession.

The history of men in the field of nursing is similar in its portrayal of women as nurses throughout history. With Florence Nightingale’s viewpoint that every woman is born a “natural” nurse, she deemed education prior to working in hospitals unnecessary. She considered nursing an extension of women’s domestic roles, which resulted in a decrease in the scientific knowledge base, values, and status in nursing. Nightingale shaped nursing and the perception that the profession was for women. Prominent male nurses throughout the history of nursing were not mentioned in the literature.
Gender Discrimination

Gender discrimination is the prejudice based on a person’s sex that can stem from stereotypes of gender roles or the belief that one sex would be better than the other in certain roles or even professions. In this case, discriminating males for being in the female saturated profession of dental hygiene. Male hygienists have stated when searching for jobs they have encountered dentists who will not hire male dental hygienists. Some male dental hygienists have been given responses stating that patients expect a female dental hygienist or the dentist cannot handle sharing space with another male. Older male patients have even mentioned when they come to the dentist they expect to see a pretty young female as their hygienist. One hygienist mentioned that some toddlers feel less comfortable with a male and recalls switching patients with a female to avoid the little one’s tears. Employers and patients seem to have gender bias towards males in the role of a dental hygienist. Andy Codding, a registered dental hygienist and creator of several national dental hygiene board review applications and software states “some male dentists just want a pretty face to sit there and clean teeth.” He also discusses problems with some women that have trouble opening up to males about their medical issues. Similarly in nursing, female patients have voiced concern
over having a male nurse providing care for them.\textsuperscript{8,24} Male nurses are consistently assigned to male patients and are required to do the heavy lifting in clinical settings.\textsuperscript{8,25} This is interesting to note, since male doctors are not routinely just assigned to male patients. This discrimination is also present in the nursing profession when male nurses have been denied access to certain areas of nursing just because they are male. The term “Male Nurse” is often used and marginalizes males in the nursing profession.\textsuperscript{8} This term discriminates against males in their profession and makes it sound as though only women can be called nurse. One male nurse described discrimination during his preceptorship where he was pushed in a room with a patient that was getting too rowdy.\textsuperscript{20} Several accounts in the literature stated male nurses had been placed in specific units based on their gender.\textsuperscript{8,14,15,19} Gender discrimination continues to be a problem with men in nursing and dental hygiene, which creates a potential barrier to more men entering the profession.

**Stereotypes**

Certain stereotypes towards males have been developed over the years in the dental hygiene and nursing professions. Many of these stereotypes listed by male dental hygienists and nurses are based solely on public perceptions of these professions and dictated by how males are perceived in dental hygiene and nursing. A common sexual stereotype that exists is that male dental hygienists and male nurses are effeminate or gay.\textsuperscript{2,8,18} A male dental hygienist seeking a job stated that office managers or the wife of the dentist called to ask if he was married or had children in order to figure out if the male dental hygienist has a specific sexual preference.\textsuperscript{4} It is assumed that men who choose nursing are gay.\textsuperscript{14} Despite lack of evidence for this belief, men nurses are questioned about their masculinity and often feel the necessity to justify their career choice.\textsuperscript{14} Sexual stereotypes like these call into question why men would choose dental hygiene or nursing as their profession. There are stereotypes from parents that children would feel less comfortable being seen by a male dental hygienist.\textsuperscript{2} An ironic stereotype in nursing is that caring is a uniquely feminine trait and men cannot care, making it
difficult for certain patients to accept care from a male nurse. If this stereotype were true, men would be prohibited from working in healthcare in general, since health care providers, as depicted in the title, actually provide “care.”

The suspicion surrounding the intimate touch of a male also brings up how men in nursing having to find appropriate ways of touching their patients to avoid the risks of sexual harassment charges. In nursing there is a stereotype based on men being more technical and have more inherent adrenaline causing them to pick specific areas of practice in their profession. The clinical area has been described as an area of concern for men nursing students because of possible misinterpretation of men’s caring actions due to the “sexualization of men’s touch.” The literature mentions this sexualized touch as a clinical concern for male nurses, yet makes no mention as to male physicians being characterized by this specific stereotype in the clinical setting. A male hygienist discusses how he feels like he is violating the personal space of his patients with large chests when working in the nine o’clock position and scaling the maxillary left linguals. Stereotypes are listed throughout the literature and personal accounts of stereotypes within the literature perpetuate a common theme that males are treated differently from females in the nursing and dental hygiene professions.

**Fear of the Unknown**

In some cases male dental hygienists have reported that dentists and patients are often under the impression that dental hygiene is not their career path and that men are just using it as a stepping stone to dental school. A male hygienist states “people ask me when I am going to dental school, or when I am going to be a dentist.” Some have mentioned that dentists worry about the comfort level of their patients with a male hygienist and one agency even told a hygienist that the doctor felt as though his patients would not be comfortable with a male hygienist. Multiple hygienists indicated that dentists had little experience hiring male hygienists, and some dentists feared what patients would think of a male hygienist in the office and if hiring them would hurt their business. In some cases the male hygienists were called doctors where they work due
to the stereotype of male doctor and female hygienist. In several incidences male hygienists described the patient or the doctor’s assumption that they would later attend dental school, indicating they may leave the job to pursue dental school shortly. The literature also shows many accounts with men in nursing where these issues are described by male nurses and reactions by patients. “Are you going to medical school some day?” or “Have you ever thought about being a doctor?” are common questions male student nurses have heard frequently. Male nursing students also discuss in pediatric rotations that children refer to them as the doctor without any cues from their parents. Unfortunately it would appear that today’s impression of the male registered nurse is that he is most likely homosexual, lacking masculinity, desperate or has unscrupulous motives. This stigma around the role of a male nurse continues to be a problem and suggests an unwarranted fear of male nurses and their role in healthcare by the public. Certain fears about male nurses due to public misconceptions continue to limit and exclude males from certain aspects of the nursing profession.

**Role Models and Isolation**

With a limited amount of male nurses and male dental hygienists, there is a lack of male faculty members to be role models for these individuals. A registered dental hygienist states “If men see more role models within the profession then I think we’ll see more of them applying to dental hygiene programs.” In the 2014 Survey of Allied Dental Program Directors, 16.2% of the total faculty from participating hygiene programs were male, with only 6% of the male dental hygiene faculty being full-time faculty members. Other male faculty represented in the survey were comprised of 21.3% part-time faculty, 25% volunteer faculty, and 17.4% student interns. Literature showed 99% of the male nurse respondents stated that no mentorship program for male students existed. They also stated 86.5% of their nursing programs lacked any history of men in the profession discussed in courses. No male faculty members were represented by 67.8% of these male nurses, showing a lack of male role models in their profession during their education. Despite the limited number of men in academia and the registered nursing
workforce, educators need to be aware that male students would benefit from clinical placements with male registered nurses.\textsuperscript{14} With lack of males on faculty and 78.4\% of respondents having no other men in their nursing classes, these male nurses lacked any influence from other males in their profession.\textsuperscript{28} Not being able to relate to the heavy female populated class and faculty, these males are left with no close professional relationships. Male nursing students frequently experience loneliness and isolation, which they associate with being men in a predominantly female environment, and they express a desire to interact more often with male role models.\textsuperscript{11,25,29} Some of these male nursing students feel they have little support outside of their immediate families.\textsuperscript{11} The most commonly perceived barriers were sexual stereotypes, lack of recruitment strategies, female-oriented profession and lack of exposure to male role models in the media.\textsuperscript{20} The literature reviewed indicates accounts by both male nurses and male dental hygienists that there is a subsequent lack of male role models within their professions and perhaps in media coverage as well.

\textbf{Language/Imagery in the Profession}

The use of the feminine pronoun to describe the nurse brings about the assumption that nurses must be female.\textsuperscript{8,30} As gender biased language continues to be used it continues to detract the minority gender to the profession. Words like “male nurse” are used to describe men in nursing, but the term “female nurse” is not used when describing women in the same profession.\textsuperscript{8,31} The same is true in the dental hygiene profession with the term “male hygienist.” In many male dominated fields the use of gender neutral terms have been used to convert textbooks to avoid gender biased language. One study notes that not acknowledging men as a vital part of the nursing profession is a barrier to men entering the profession.\textsuperscript{16} It states “No history of men in nursing was presented in texts or the classroom, and textbooks and faculty referred to the nurse as “she” rather than she/he.”\textsuperscript{16}\textsuperscript{,}\textsuperscript{16} Many nursing programs have yet to move to the usage of gender-neutral textbooks.\textsuperscript{8,24} The current edition of \textit{Clinical Instruction and Evaluation A Teaching Resource} is a prime example of text books in nursing that have
yet to adopt gender-neutral language when describing the nursing faculty. A passage of the text reads: “For example, an instructor who also maintains an employment relationship with faculty must guard against inevitable role confusion, as may occur when the staff need her while she is trying to teach.” A lack of male representation in nursing textbooks exacerbates male alienation in the field of nursing. Ability to attract men to the profession along with rising attrition of male nursing students makes translating gender biased textbooks in nursing an important barrier to overcome. Advertising, marketing and images of dental hygienists and nurses often depict females in the profession. Society views these images and gains the perception that people in the nursing and dental hygiene profession must be female. Male dental hygienists have mentioned their patients often think they are a dentist and not a dental hygienist, based only on the fact they are male. This public perception is only furthered by gender biased images and texts about dental hygienists. Some nursing programs have begun marketing campaigns to attract men to the profession with posters depicting tough-looking jocks as nurses. Oregon Center for Nursing uses a poster with the slogan “Are you Man Enough…to Be a Nurse.”

Visible/Invisible

Representing a low portion of the class, male students are often more visible and stand out to faculty more than female students in dental hygiene and nursing courses. Male nursing students noted mixed emotions in their role of being more visible. Some seemed to think it was beneficial to be more visible, while others would prefer to be on the same playing field as female students. One student commented “they pick you out in class a little more often and that’s just because we are more visible,” when describing classroom experiences. A situation where a faculty member would ask a broad question and no one would answer, they would call on the male student because the name was easier to remember. While not only being isolated due to lack of males in the nursing profession, some males felt as though they were picked on more just due to the fact being a minority made them more visible. One article describes males playing an
important, but invisible role in nursing, stating this invisibility has contributed to the ideological designation of nursing as women’s work and played a major role in excluding and limiting men’s full participation in the profession.\textsuperscript{19} A male hygienist also describes feeling invisible when teachers would say “okay girls this is what we have to do or does anyone have to go to the ladies room.”\textsuperscript{2}

**Current Status of Dental Hygiene**

According to the 2012-13 ADA Survey of Allied Dental Education, 4.2\% of dental hygiene students are men.\textsuperscript{6} The 2015 ADA Survey of Dental Hygiene Education shows only 3.7\% of students graduating from dental hygiene programs were male.\textsuperscript{7} In 2015 the U.S. Bureau of Labor Statistics reported 96.4\% of working dental hygienists were female.\textsuperscript{34} These reports show us the number of male hygienists in the United states remains fairly low both in dental hygiene programs and out in the dental hygiene workforce. The literature mentions several recurring themes: history of men in the profession, gender discrimination, stereotypes, fear of the unknown, role models and isolation, language/imagery in the profession, and being visible/invisible.\textsuperscript{2-4,7,10,12-19} These are possible barriers to men that exist in the dental hygiene profession as well as the nursing profession listed in the literature and suggested by male dental hygienists and male nurses within these articles. There were several limitations to the literature that are listed below. The literature shows no research done whether to prove or disprove these possible barriers to men in the dental hygiene profession. We are left with statements of but a few men in the profession and their personal accounts on whether or not these barriers hold any statistical significance to why there are so few male dental hygienists. There is also a lack of literature depicting the opinions of male students entering undergraduate dental hygiene programs. The literature also fails to address female views of the dental hygiene profession and whether male perceptions are different. We are left with a small population of male dental hygienists and very few reasons to why this continues to be a problem. Lack of literature describing actual barriers to men in the dental hygiene profession leaves undergraduate dental hygiene programs wondering what
barriers prevent men from entering their programs and how they can attract more men to the profession.\textsuperscript{2-4,13}

The literature does provide us with some common themes on men in dental hygiene and men in nursing. These themes serve as possible barriers to men entering the dental hygiene profession. Many of the articles focused on males and their experiences after graduation. Few articles discussed experiences of males as dental hygiene students, while none of the articles gave the perspective of males entering into the dental hygiene programs. Further research is needed to identify male students entering the dental hygiene profession and their views of barriers men face entering the dental hygiene field. The literature fails to mention what causes many females to apply to dental hygiene programs. This may give clues to why so few men have joined the profession and help identify barriers that men perceive and women do not when applying to dental hygiene programs. A lack of attention on barriers in the literature gives some potential barriers to men in dental hygiene described by male registered dental hygienists, yet lacks the opinions of male students entering dental hygiene programs and whether they encounter these barriers when entering into these programs.\textsuperscript{2-4,13} Further research will be required to determine if male students encounter these barriers and whether they hold any significance on male’s decisions to enter into the dental hygiene profession.
Chapter 2: Methodology

Objectives

The Objectives to this study are:

1. To explore and identify barriers that limit male students from entering undergraduate dental hygiene programs.

2. To determine whether female dental hygiene student’s opinions differ from male dental hygiene students on whether certain gender barriers exist in dental hygiene.

Background and Rationale

Even though it is well known that diversity within populations can enhance decision-making skills and success, the dental hygiene profession remains dominated by females.\(^1\) This study will explore barriers that exist within the dental hygiene profession that prevent more males from joining the field. Relatively low numbers of males entering dental hygiene programs have not seen a significant increase in decades and this study looks to find possible barriers that exist preventing this number from growing.

In 1915, the first legal definition of dental hygiene practice recorded in Connecticut read: Any registered or licensed dentist may employ women assistants who shall be known as dental hygienists.\(^2,21\) Early definitions of the dental hygienist represent gender inequality and a lack of gender diversity from the birth of the dental hygiene profession. History has shown a rather low increase in male dental hygienists over the years with little explanation of why this occurs. Data from 2000-2001 showed 97.3% of the 12,629 dental hygiene students were female.\(^2\) The numbers from 2012-2013 represent
4.2% of dental hygiene students were male. The 2007 U.S. Bureau of Labor Statistics reported 99% of working dental hygienists were female. These numbers indicate very little gender diversity in the dental hygiene profession. With only a small sample of literature on men in dental hygiene, it is important to look at other health professions facing this same problem. While the nursing profession has seen a slight increase in the past few decades in the amount of male nurses, the data compiled shows a slow acceptance of males into the field of nursing over the years. Very similar numbers exist within the nursing profession, where males represent a very small portion in the nursing field. It has taken 30 years for the number of male nurses to increase from 2.7% to 5% of the nursing population. In 1992 the number of male nurses leaving the undergraduate nursing program was 2% and has risen to 7%, indicating potential barriers that may exist to retaining male students in the undergraduate nursing programs. By the year 2002 the males accounted for 10% of the nursing profession. Although roughly half the population is male, in 2008, only about 7% of the RN workforce was male. The literature provides these figures showing the lack of males in the dental hygiene and nursing professions over the last 25 years, indicating little change over time and possible problems with gender diversity within the two professions. Looking at barriers the nursing field have identified within their own profession, may be the starting point for what potential barriers may exist to men entering dental hygiene programs.

The literature has presented multiple recurring themes to why men have faced barriers in nursing and dental hygiene. Some literature portrays these recurring themes as possible barriers, while others just state that they might be reasons that prevent more males from joining the profession. The theoretical framework used for this study stems from barriers represented in current literature: history of men in the profession, gender discrimination, stereotypes, fear of the unknown, role models and isolation, language/imagery in the profession, and being visible/invisible. Interviews with male nurses and male dental hygienists list multiple accounts where men have described these themes having an effect on themselves or other males in their profession. There are several studies that outline the possible reasons or
barriers to men entering the field of dental hygiene or the field of nursing. These recurring themes or barriers from nursing and dental hygiene literature are areas that still need explored and identified.

This study will help identify barriers that exist to men entering undergraduate dental hygiene programs. Using barriers to men found in nursing literature and personal accounts of male dental hygienists about their experiences, gives some idea of what may be preventing more males from joining the dental hygiene profession. This study aims to further explore these barriers and see if undergraduate dental hygiene students identify these barriers during their interviews. More importantly adding a female study group will help determine whether males and females identify with problems in the dental hygiene profession differently. The literature on men in dental hygiene rarely makes a comparison on any of these issues. The rationale behind this study is to understand the barriers men face in entering the profession that are different than the ones that women face, so that we can identify these problems and increase the gender diversity of the dental hygiene profession. The American Council on Education (ACE) describes the importance of diversity in higher education. ACE states: Diversity enriches the educational experience, it helps promote personal growth and a healthy society, it strengthens communities and the workplace, and it enhances America’s economic competitiveness. This gives rationale on why it is important to identify gender barriers that exist in dental hygiene, so we can help grow and foster a more diverse profession. Interviewing first year male and female dental hygiene students will provide great insight on their thoughts about the dental hygiene profession before they entered and now after they have been in their hygiene programs for a semester. This will hopefully show whether male and female identify with certain barriers before or after they enter the program, while also providing any difference of opinion between male and female dental hygiene students towards potential barriers.

**Procedures**

This was a qualitative research study utilizing recorded interviews of first year
undergraduate dental hygiene students. This study was deemed exempt by the Institutional Review Board at The Ohio State University. Students for the study were recruited via letters emailed to dental hygiene program directors asking for participation from first year dental hygiene students. Four female first year dental hygiene students and one male first year dental hygiene student were recruited via this method. Four additional first year male dental hygiene students were recruited by posting this same letter on a social media Facebook group “Mr. RDH,” an exclusive group for male dental hygienists and male dental hygiene students. All interviews were completed by the principal investigator or a research assistant and were recorded. Each recording was transcribed and the recording deleted. Participation in this study was voluntary and each student was asked to give their verbal consent prior to participating in the study. Students were also made aware they could refuse to answer any questions and end their participation in the interview process at any time. Data was also member checked with students to ensure that the data represented their own thoughts, perceptions, and ideas and were not misrepresented or misguided by the interviewer. In order to protect each participant’s privacy and allow their identity to remain anonymous, pseudonyms were used to identify each interview transcript.

Sample

The study sample included 5 male and 4 female first year dental hygiene students from dental hygiene programs in the United States. Program Directors were contacted through their email addresses retrieved from the American Dental Hygiene Association directory of program directors. Program directors from around the United States were asked to forward this email to first year dental hygiene students that describes the research study and asked for anyone interested in participating to reply. Interested students contacted the principal investigator to set up a recorded interview time. The study included a total of 9 interviews and split between 2 study groups of 5 males and 4 females.
Measurement/ Instrumentation

Interviews were used to collect data from both male and female study groups. The guided interview used open-ended questions to obtain useful information based on the undergraduate dental hygiene student’s experiences prior to and during their first year in their dental hygiene programs. The questions addressed reasons why the students chose to enter the dental hygiene field, any concerns students had about dental hygiene, stereotypes in the profession, gender diversity in the classroom, how they viewed dental hygienists in images and the media, and anything they would like to change about the dental hygiene profession.

Internal Validity

The study maintained validity using multiple interviewers for data collection. This served as a reduction in single interviewer bias in this study. Both interviewers followed the same interviewing protocol and used the same instrument to ask the same open-ended questions to each participant in the study.

Member checking will be used to validate the participants’ transcripts. Each participant was asked if everything they stated in the interview represents their own views and opinions and were not altered by anyone during the interview process.

Data Analysis

The data was indexed and coded and analytic induction paired with the constant comparative method was used for analysis. The process of analytic induction measure involves reviewing the data that can be grouped into categories and then finding relationships amongst those categories. The constant comparative method codes and compares these categories to represent relationships. The two methods combined helped establish common themes and allowed us to determine various relationships between the themes. Interview questions were analyzed based on themes of participant agreement to determine if specific barriers existed to men entering undergraduate dental hygiene programs.
Chapter 3: Results

It was determined after only four female participants completed their interviews that enough data was collected to identify themes and comparisons required for the study. The study concluded with a total of nine participants from 5 different states, spanning 3 time zones and included 8 different dental hygiene programs. Eight of the dental hygiene students participating in this study elected to complete their recorded interview via phone calls. The ninth participant chose to complete his interview via an in-person recorded interview. After interview recordings were transcribed, answers given by each participant were indexed to find any comparisons or emerging themes pertinent to the study. Indexed results were grouped into male and female categories to first compare individual responses with their own gender. Both genders responses were then compared together to see if any common themes emerged. Finally each participant’s responses were evaluated to draw any relevance to the recurring themes presented in the review of literature.

When comparing responses given by each female participant, it became evident that certain questions elicited the same or like responses between the four females in the study group. Comparisons could be made between the individual’s perceptions and experiences both before and after they entered their dental hygiene programs. These comparisons based on the female study group’s perceptions and experiences can be arranged into specific categories. The categories include: Initial Concerns About Dental Hygiene, Initial Perception of the Hygienist, How Hygienists are Depicted in Pictures and the Media, Stereotypes About Hygienists, Equality in the Hygiene Program, and Gender Diversity in the Program. The female study group’s responses were also reviewed and compared to the recurring themes about barriers to males in dental hygiene found in the review of literature. Comparisons could be made with only four of these themes based on
their responses. They include Language/Imagery in the Profession, Stereotypes, Gender Discrimination, and Role Models and Isolation.

Reviewing the male study group’s responses yielded comparisons between individual’s thoughts, perceptions, and opinions in many of the same categories the female study group responded to. Due to this the male responses were grouped into the same categories as the female participants. Once again these categories include: Initial Concerns About Dental Hygiene, Initial Perceptions of the Hygienist, How Dental Hygienists are Depicted in Pictures and Media, Stereotypes About Hygienists, Equality in the Program, Gender Diversity in the Program. Comparisons in these categories were used to show differences between individual male participant’s views and perceptions of the dental hygiene profession as well as a comparison between male and female study groups. As described previously with the female study group, male responses were also analyzed for any relationship to the initial recurring themes mentioned in the review of literature to better understand the accuracy of these potential barriers to men in dental hygiene.
Chapter 4: Discussion

Initial Concerns About the Dental Hygiene Profession

It is important to note whether male or female students had any concerns entering the dental hygiene profession. Three of the four female participants noted they had no concerns entering their dental hygiene programs. Caylee one of the three to say she had no concerns but added “I am a little nervous about giving local anesthesia.” The only female dental hygiene student to mention any concerns about entering her dental hygiene program was Julie, who said “I was concerned about how far I could take it, if I needed my bachelors degree and how intense the schooling would be. Right now I don’t see it being a big deal, but in the future I feel that all dental hygiene programs are going to have to be a bachelors degree.” Although the majority agreed they had no concerns, the concern about the future of dental hygiene and the hot button topic of having two different entry-level degrees was raised. Julie and many other dental hygiene students are entering their dental hygiene programs with uncertainty about the degree level they should be attaining in the dental hygiene profession. The current state of the dental hygiene profession is that 2 entry-level degree programs exit. These accredited dental hygiene programs graduate their students with either an associates’ degree or a baccalaureate degree. New research is coming out showing the benefits of moving towards baccalaureate entry-level dental hygiene programs. Minimally an entry-level baccalaureate degree will promote the successful contributions of dental hygienists working in inter-professional collaborative environments with other health care professionals with like degrees. More importantly, appropriately educated oral health care professionals will be positioned to better meet the complex health needs of the public with quality comprehensive care. Evidence of this long debated topic can be seen in discussions by the American Dental Hygiene Association (ADHA) as early as
1986. With no end to this debate in site, the dual entry-level degrees in dental hygiene will continue to be a concern to students entering dental hygiene.

The only male to say he had no concerns before entering his dental hygiene program was Chad who mentioned “my program required I do two 4 hour observations, with two other hygienists and so I thought that gave me a good idea of what dental hygiene was about.” The males stated concerns regarding gender, predominantly/historically female dominated field, and ability to get accepted into the dental hygiene program. Matt mentioned “I didn’t even know if I would get a look you know. Just because I was male, I didn’t think I would even get a chance.” Another male student Joe replies “I knew it was competitive and with the struggles that I had previously with science classes, I was worried I wouldn’t be able to get into the program.” With multiple males noting gender concerns and one student even stating because he was male he didn’t think he would get accepted into the dental hygiene program, we begin to see the emergence of how male students perceive the dental hygiene profession. Joel said “A lot of new dentists seem to hire more male hygienists compared to older dentists that mainly hire females.” Not only do these males note gender concerns overall, but specify concerns with males being accepted into dental hygiene programs and also trouble finding dentists to hire them after graduation. Paul also mentioned “Well there are quite a few offices in my city and I have not found one male yet in any offices.” Joel stated “when I was applying to a few places as an assistant, I got rejected by some dentists that would rather hire a female assistant.” So visually male students are not seeing many other males practicing dental hygiene and other male students had personal experiences in the dental field that lead to these beliefs that certain dentists did not want to hire male dental assistants or dental hygienists. Other male hygienists have noted similar experiences when searching for jobs. “I had an office call the temp agency (I was working for) and cancel me clearly because they didn’t want a male hygienist.” Another male dental hygienist describes a situation where two co-workers tried to make him quit because they didn’t want a male hygienist. There was a male who even talked to a dental hygiene instructor when he wanted to switch from his engineering major and she said “I
can’t let you…nobody will hire a guy. At the end of Joel’s response for concerns about dental hygiene he says “Just a few barriers to men I guess.” There are multiple accounts of male hygienists that describe barriers or concerns in the dental hygiene profession. Barriers in the form of gender discrimination while hiring when an office manager told one male hygienist the male doctor would not want to hire him because he was a man. Others state, “sometimes dentists just want a pretty face to sit there and clean teeth.” Another barrier discussed was the lack of role models in dental hygiene and if men saw more male dental hygiene instructors that would increase the amount of males applying to dental hygiene programs. Male dental hygienists have also experienced and described concerns with societal gender stereotypes. These are all accounts where other male hygienists have described their experiences with barriers to men in dental hygiene. While Joel is the only one to describe them as barriers to men, the other male participants seem to be on the same page with their concerns about being male and trying to enter a predominantly female dominated profession.

Comparing the results between the male and female study groups, there is a disparity between the answers the female hygiene students gave compared to what concerns the male hygiene students had. Whereas many of the female students seemed to have no concerns at all entering their dental hygiene programs, the men on the other hand spoke of gender concerns and barriers to men entering the dental hygiene profession. Some discussed how they might not be able to get into the dental hygiene program because they were male, while others discussed the historical female dominance of the profession. These concerns mentioned by male participants in this study are not being raised for the first time. A registered male hygienist states “Some hygiene schools would not accept males.” These are students identifying these concerns, which gives us a look at how male students perceive the dental hygiene profession prior to applying or entering undergraduate dental hygiene programs. The lone female concern shows just how differently female students view the dental hygiene program prior to entering their dental hygiene programs. While many of the males focused solely on gender concerns, Julie
had a concern that affects all students entering the dental hygiene profession. She wanted to know how far she could take her degree and if she required a baccalaureate degree or would an associates’ degree suffice. With 287 entry-level dental hygiene associate programs and 59 at the baccalaureate level according to the ADHA in 2015, many students are choosing to go the route of an associates’ degree. This debate over dual entry-level degrees will continue and for now students will have to face the choice of which degree in dental hygiene they wish to pursue. In terms of comparing the male and female study group’s results, we can see a vast difference in the way male and female dental hygiene students view concerns about the dental hygiene profession before they enter their programs. It would appear most male students entering undergraduate dental hygiene programs do have gender concerns prior to entering the dental hygiene profession. The female students have few to no concerns of any kind prior to entering their dental hygiene programs.

**Initial Perception of the Hygienist**

When asked what their perception of the dental hygienist was before they entered their respective programs, the female study group had two emerging themes between their responses. Three of the four female dental hygiene students mentioned their perception of the dental hygienist as female, noting that growing up all the dental hygienists they had seen were female. Caylee states “I think I know about two male dental hygienists and that’s about it, I think, and dentists I typically think of as males.” So the majority of the female participants identified the hygienist at least before they entered the program with the female gender, with the main reasoning being experiences in childhood seeing female dental hygienists. The other theme that emerged about their initial perception of the dental hygienist was that the hygienist is someone that just cleans teeth. The majority of the female study group participants mentioned their initial perception was the role of the dental hygienist was to clean teeth. While this was their initial perception of dental hygienists, each female student did mention their perception has changed about the dental hygienist. Many mentioned it was not was easy as it looks
and the program has been a lot harder than they thought. Julie says “seeing most of my class is female I still see it that way, but would like more men to get in the profession and increase the diversity.” Julie does come from a dental hygiene program where all the students in her class are female, so it is easy to see how her perception of the female dental hygienist has not changed much.

The male study group had a couple comparisons of their own when it came to what their initial perception of the dental hygienist was. The first, just as the females mentioned, was the perception of the dental hygienist as just the tooth cleaner. Two males in the study did describe the hygienist as an educator. These two students described the initial perception of the hygienist’s role as preventative education and creating care plans and home regiments for their patients. The four male participants that mentioned the hygienist as the tooth cleaner have all changed their opinions after being in their dental hygiene program, and now see just how much the dental hygiene position entails. Paul mentions “you get in the program and realize it is very different and has lots of opportunities, not just in the dental office.” Most of the male hygiene students in the study didn’t really know what the hygienist did until they entered the program and what opportunities there are for dental hygienists.

The male and female study groups both had the same perception that the dental hygienist was just a tooth cleaner. A bit surprising that the majority of the dental hygiene students in the study were not aware of other aspects of the profession before they entered their dental hygiene programs. With the perception these students had about the dental hygienists as the tooth cleaner, it becomes more evident how much public perception shapes how the dental hygiene profession is seen by society and perspective students looking at dental hygiene as a career choice. This perception could potentially be a barrier to undergraduate students looking at professional programs and saying “I don’t want to just clean teeth.” The big contrast between the male and female responses was the majority of female participants mentioned in their initial perceptions of dental hygienists that they were female, with one student adding she still felt that her perception of hygienists is still mainly female. None of the males in this study mentioned anything
about the dental hygienist being a specific gender when describing how they perceived
the dental hygienist and what their role was in the dental field. For as long as the
profession has been around, women have been the faces of dental hygiene. This is likely
due to the fact, according to the 2007 U.S. Bureau of Labor Statistics, 99 percent of
dental hygienists are women. While the men in the study did not describe this female
perception of dental hygiene in their initial thoughts of the profession, we can see based
on these statistics why many of the female students were able to so easily define their
perception of the dental hygienist as female.

**Hygienists Depicted in Pictures and the Media**

All participants were asked how they saw dental hygienists depicted in posters,
pictures, and advertising. The four female study group participants all mentioned that
hygienists depicted in these images were female. Caylee describes hygienists in these
images as “pretty, attractive women with, I mean she looks flawless.” Julie also
describes the hygienist as a pretty female. Others note that the hygienist is smiling,
holding a mirror, and wearing a lab coat, mask, and gloves. Overall the female study
group has seen pictures and advertising only depicting the dental hygienist as a beautiful
young female that wears some protective clothing, holds a mirror and smiles at their
patient. Jackie adds “I don’t think that would be an accurate depiction, my current class
is full of all races, genders, and we are very different from one another.” She goes on to
say “yeah sure we are helping people and cleaning their teeth but it’s definitely a messy
profession, so I don’t think we always look so beautiful.” These same sentiments are
made by the other females in the group that it is not always a pretty and glamorous
profession and the images do not do justice to the role the dental hygienist plays in the
dental field. This depiction of a pretty female hygienist holding a mirror, smiling at the
patient is not what we look like or an accurate depiction of what we do in the dental
hygiene profession. Images such as these have also been identified in nursing. The
traditional images of nurses – that of angels, sex symbol, doctor’s handmaiden and
notably, women. These image have been reinforced by the mass media, which
continues to perpetuate nursing as a “feminine” profession.20 Many of the female students describe the media portrayal of the dental hygienist in much the same way they are depicted in pictures and advertising. They mentioned that the media represented the dental hygienist as female in gender and usually as attractive or pretty. They also responded saying that many media outlets lead you to believe the hygienist is not smart or that they don’t require a lot of education. Jackie mentions a recent event on the television series the Bachelor saying “The Bachelor comes to mind, which you know they kind of made them seem like dental hygienists aren’t very intelligent.” Unfortunately people watching shows like this are being given false perceptions of what the dental hygienist looks like and more importantly what kind of education we receive.

Perspective students looking for a professional program in college may not give dental hygiene a second look based on these depictions and perceptions made in advertising and the media. Caylee states “I just got something on Facebook about dental strong and it was all these pictures of women doing fitness and it was all female dental assistants and dental hygienists, they didn’t mention anything about males.” A group advertised as dental strong and all the images are of female assistants and hygienists, which doesn’t exactly show great diversity in the profession. Even in the dental profession, advertisements such as these have been geared towards the female gender, offering an interesting perspective on who should be dental hygienists.

The majority of the male study group members also see the dental hygienist being depicted as a female in pictures and advertising. Matt comments “You really don’t see guys in the images, or at least I haven’t seen any.” Other males in the study made similar remarks citing that males are not portrayed in images of dental hygienists. Chad added “more often than not the dentist is portrayed as a male.” Not only are the hygienists being depicted as females, but the male students in the study have all noticed pictures and advertising don’t even show male hygienists, at least that they have come across. Joel states the images show “females, usually a female, pretty, um slender, just kind of a pretty girl job.” This depiction that dental hygiene is a pretty girl job is not just a problem for men entering the profession, but females as well. By glamorizing the women
in these images, society is putting up a barrier to all students that do not fit this classification of the pretty young female hygienist. What is interesting is two of the male students mentioned that for the most part some of these depictions are fairly accurate. Joel states “50/50, half of my classmates look like the pictures of dental hygienists like a model and half of them don’t.” Also mentioning “It does kind of attract those individuals that look like that kind of hygienist.” Chad replies by saying “I guess if you are going to represent 95% of the population of dental hygienists, these images would be fairly accurate.” So what we are seeing from male respondents is that some of these depictions are accurate and further the female model-like perception of the dental hygienist. In comparison to pictures and advertising, a few male participants mentioned that hygienists were not depicted at all in the media and the focus is usually on the dentist in the media. Matt was the only male to mention they showed mainly females in the media when describing dental hygienists. Matt also stated “Like a year ago on some reality show they talked about how dental hygiene wasn’t a real job, like it was an imaginary job or something like that.” This being a reference to the Bachelor television series, which caused an uproar in the dental hygiene community when it happened. ABC’s The Bachelor posted on their Facebook page a compilation of 12 pictures depicting ridiculous and fake jobs that contestants have put on their applications over the years. Dental hygienist was included, among others like hashtag enthusiast, flatulence smell-reduction underwear tester, jewelry untangler, etc. This image can be seen in Appendix B figure 1.1. Hygienists already have a hard enough time educating the general public on the importance of our services and role in preventive health, let alone getting the general public to realize we have a college education, must pass multiple board exams, and are licensed healthcare professionals. With over 1.5 million followers to their Facebook page, images and media perception such as this can have a damaging affect on how the public views the dental hygiene profession.

It is easy to see that both male and female dental hygiene students in the study had some problems with how dental hygienists are being depicted in the pictures, posters, advertising and the media. Males and females alike noted the images of hygienists in
advertising and the media focused on gender, age, beauty, and fashion. Many of the student’s responses discussed that images didn’t make dental hygienists look intelligent and did not accurately portray what the hygienist does in the dental field. The biggest problem with the images is they make it look like hygienists stand there and look pretty while they hold a mirror and clean the teeth. Jackie states “I mean at the end of the day your back hurts, you’re worn out, you’re tired, so umm you’ve got prophy paste in your hair and sometimes blood on your scrubs, so I don’t think that would be 100% accurate or very much close.” The bigger picture is with images like this in the media and advertising, what is the public perception about dental hygienists in terms of what society thinks we do and what we look like. When asked if these images help or hurt the dental hygiene profession, Julie says “I do think it hurts the profession, people don’t know what all we do and what all we have to learn in school.” Matt mentions “the most common misperception is that we just clean teeth.” So perhaps a change is in order in terms of how hygienists are represented in these images. It seems that as society views these images they get a very misconstrued version of what a dental hygienist is. They are lead to believe they are coming to the dental office to get their teeth cleaned by some beautiful model-like female hygienist and that’s it. The profession attracts female students that look like this as Joel mentioned with 50% of his class falling under this description. Joe talks about his experiences in clinic stating “I have patients here that have said I’ve never had or seen a male hygienist.” A male registered dental hygienist states “It is my goal to educate society about the dental hygiene profession, to show it as the preventative frontier of oral disease and (to show) hygienists as promoters of health, regardless of gender.” The last thing our profession needs is a widely viewed network and TV show marginalizing our profession. These two statements reiterate how important the public perception of dental hygiene is. The one stating the damaging effects a popular television show can have on the profession and the other how we as a profession need to educate the public to change these misguided perceptions and show the value of dental hygienists in the oral health field. The public, including undergraduate students are influenced by advertising and media in some way, so how dental hygienists are perceived in these
images can create barriers for certain students looking at dental hygiene as a possible career.

**Stereotypes**

Stereotypes give us an interesting perspective on what people think about the dental hygiene profession and dental hygienists in general. Each student was asked if they are aware of any stereotypes about dental hygienists and whether or not they felt they were true or not. The female participants mentioned that a common stereotype is that dental hygienists are women or prophy princesses as a female student put it. Caylee and Brittany both were in agreement that for the most part this is true. Jackie noted that “I think every stereotype comes from somewhere, someone did this that fits that role and the unfortunate thing about stereotypes is one person can be one way and influence mass amounts of people, but I don’t think this includes everyone.” To some degree there is truth to the stereotype that dental hygienists are female. Two of the female participants also described the stereotype that dental hygiene wasn’t hard and that they just clean teeth. As mentioned before this is a common perception about dental hygienist, but both were quick to say this stereotype is inaccurate. Hygienists do so much more than clean teeth and there is a lot of hard work and intense schooling required to be a hygienist. Again we are reminded that the public perception of dental hygiene is that they are female and just clean teeth according to the stereotypes listed by the female study group.

It is important to note that when asked directly about what stereotypes existed in dental hygiene, many students had limited responses. However throughout the interviews many students referenced different stereotypes in the dental hygiene profession, which will be discussed later. For the sake of this section, only the stereotypes students gave when answering the question if they were aware of any stereotypes and if they thought they were true or not will be used. Two of the male participants mentioned the stereotype that women are hygienists. Chad noted “I had one dentist tell me his hygienist told him that RDH stands for Royal Dental Highness instead of registered dental hygienist.” Chad also mentions stereotypes about hygienists being prima donnas’, having

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control issues, and being germaphobes. Matt replies “As a male hygienist they automatically assume that you are heavy handed.” This is a familiar topic discussed literature by male hygienists and male nurses.2,18 “Many people automatically assume that a male hygienist will be more rough when treating them.” Physical touch is the central focus of caring.18 Evans (2002) highlights the problematic nature of male nurses’ touch and suggests the stereotype that appropriate touch does not come naturally to men.18 We begin to see males entering female dominated medical fields such as nursing and dental hygiene are already facing stereotypes about being rougher or not having a caring touch that females in the same profession posses. Other male participants mentioned hygienists are settling because they couldn’t be dentists and one male discussed how patients think the hygienist is the dentist or that they think the hygienist is the assistant. These sentiments have been shared by other registered dental hygienists as well.2,4 “I just became the president of the Massachusetts Dental Hygienists Association and my local newspaper (published) a story about me. The headline read: Local dentist leads association.” A common misperception among patients is that men in the position of dental hygienist are the dentist or on their way to dental school.4 “I believe the stereotype of the male doctor and a female hygienist still exists in the public’s mind.”

These accounts from male registered hygienists seem to support the stereotypes men in this study have mentioned. Most of the males rejected these stereotypes as being accurate, although Chad did say “if you want to generalize it, the vast majority of dental hygienists are females.” So again we see this stereotypical perception of the hygienist as a female due to the field of dental hygiene predominantly being female. As for the males being heavy handed, Matt replies “I had a few patients that said you are really light handed, you know I expected you to be very heavy handed, but my instructors always say all guys are heavy handed.” Another male registered dental hygienist discussed his patients experiences after he had finished their prophies, stating “They are pleasantly surprised when they have a very comfortable experience with me; I am often referred to as gentle John.” The second part of Matt’s statement was really concerning that his dental hygiene instructors were fostering a false stereotype about male hygienists. It is
one thing for patients to have this perception of males in the dental hygiene field, because they haven’t seen many male hygienists or they see males as muscular and heavy handed, but for a hygiene instructor that is part of the profession to be saying this is unsettling. It is stereotypes like this from instructors that worry me the most that perhaps there are reasons to why gender diversity has not increased in many of these hygiene programs.

Comparatively the male and female study groups came up with much of the same common stereotypes in dental hygiene. The main stereotype being that dental hygienists are females, occurred most often between the two study groups. While some thought this was a false stereotype, some thought there was a little truth to hygienists being female. The two study groups revealed that with predominantly females in the profession the generalization could be made that dental hygienists are female. While some stereotypes could be used to describe anyone like germaphobe, having control issues, obsessive-compulsive disorder (OCD), and perfectionists, there were some stereotypes about hygienists that were specific to ones gender. Female hygienists were stereotyped as prophy princesses, prim donnas’, and royal dental highness. While the males were stereotyped as being heavy handed by patients and instructors. The female stereotypes tended to be more based on being high maintenance, whereas the male stereotype focused more on male gender discrimination. These stereotypes show us that people think of the dental hygiene profession as a female profession. Most of the participants agreed with that stereotype to some degree and the only male stereotypes happened to be very negative towards males entering dental hygiene. The instructors we pretty much saying males can’t care for their patients, that they are all heavy handed. This is a very broad generalization of men in dental hygiene based on the low percentage of these instructors that would have even worked with a male in the dental hygiene profession. When it comes to these stereotypes about dental hygienists, Chad summed it up pretty well by saying “I think that may fall into the category of a few bad apples spoil the bunch.” While some hygienists exhibit these characteristics, it does not mean they represent all the dental hygienists in the profession.
Treated with Equality

This is an important topic when trying to understand if barriers to undergraduate dental hygiene students exist within the dental hygiene classroom. Each student was asked if they feel that they are treated with the same equality as all the other students in the classroom and in their hygiene program. All four females in the study group replied with yes they were treated with the same equality as all the other students in their class. Jackie states “We have a lot of good instructors and I think they try their best to treat us the best they can. I really love the program I’m in and even though I come home crying sometimes, I feel our instructors are always there for us.” As far as equality in their dental hygiene classroom goes, all females felt they were treated equally.

The male experiences within their own programs did not elicit the same unified answer of equality the female study group had. One male student Joe was the only male to answer “I am treated just like everybody else.” While Matt mentions “I think they all treat us as professionals,” he recalls being asked interview questions prior to getting into the program that were aimed specifically at him being male. Matt mentions “during the interview one of the faculty members pointed out to the other two that I was married.” He also says “it was awkward and they asked me how I would feel working with predominantly females.” When Matt discussed the interview questions with other students, they thought it was weird he had been asked those questions. He also states “None of the other students were asked the question if they were going to want to go to dental school after dental hygiene, I was the only one that was asked that.” So from the very beginning of the interview process to get into the dental hygiene, Matt had to deal with gender discrimination while answering questions from faculty members. Similar situations have occurred to registered male hygienists when looking for jobs. “I had dentist’s wives contact me by phone prior to interviewing me so they could legally ask if I was married or had kids, (By) which I assume they were inquiring about my sexual preference.” To only ask these kind of questions to a male student in interviews to get in the program is discrimination and could land this dental hygiene program in some serious legal trouble. When asked about if he was treated equally, Chad replies “You know,
honestly, I don’t. I feel I am held to a higher standard than my classmates. To the same question Joel replies “I don’t know if it is personality or prejudice but there is one that I do feel sticks out and that I feel more isolated against. I stand out a lot more to her, so I have to be 100% on my best behavior so I don’t stick out more.” He goes on to say “Instructors try to be gender or male friendly but there are a lot of stereotypes where men are more dirty or more rugged and don’t know how to take care of their hygiene. I have to stand up and mention what about me when they say things and mock men in front of me.” Whether it was gender biased interview questions, held to a higher standard, feeling of isolation, or had their gender mocked in front of them, each of these males have felt some sort of gender discrimination in their dental hygiene programs. Paul states “I feel like the chosen one.” He goes on to say “We are treated better than the ladies, because they don’t want to lose us.” While Paul’s experience has been a pleasant one, he is being treated differently because he is a male in his dental hygiene program. These statements show the harsh reality that many of these male dental hygiene students are faced with gender discrimination and gender stereotypes within their dental hygiene programs. The examples given by these male students paint the picture that they are not being treated as equals in their own dental hygiene programs.

When we compare the results between the responses given by the male and female study groups, we can easily see the great disparity between how males and females view how they are treated in their hygiene programs. The females all experienced equality in their program, making no mention of being treated differently from other students in their dental hygiene class. The males on the other hand had vastly different experiences in their own dental hygiene programs. The majority of male participants identified with at least one thing that stood out to them making them feel unequal to the rest of the students in their dental hygiene programs. Chad identifies with feeling like he is held to a higher standard than other students because he is male. Joel describes feeling isolated due to a specific instructor and that instructors mock men and use false stereotypes to describe males in front of him. Matt feels he was given gender-biased questions in interviews with faculty members while applying for his dental hygiene
program. Paul seems to think the males in his program are treated better than the female students in fear that they may lose some of their male students. Whether treated better or unfairly, each of these students mentioned they were treated differently than the rest of the students in their dental hygiene classes based solely on their gender. Inequality such as this hurts the profession and attempts at achieving more gender diversity. There are already female stereotypes, public perceptions, and a majority of females in the dental hygiene profession, and now we add gender discrimination and lack of equality in dental hygiene program to the list of things males entering dental hygiene must go through. With a profession that constantly trying to diversify itself and expand it’s functions, maybe the dental hygiene profession should be looking at why certain students are being treated differently in their dental hygiene programs because of their gender.

**Gender Diversity**

This study centers around the lack of gender diversity in the dental hygiene profession, so it is important to see what kind of gender diversity each student has in their own dental hygiene programs. Of the four female students in the study, only two state they have any male students in their dental hygiene class. Jackie replies “We could definitely use a few more guys in our class, that’s for sure. We only have two out of twenty.” Table 1.1 depicted in Appendix B was used to represent the gender diversity in each of the student’s dental hygiene classes, specifically the percentage of males represented in each of these classes. When asked about gender diversity amongst the dental hygiene faculty members, two female students stated they only had one male hygiene instructor in their program. Jackie says “sometimes another male hygiene instructor from another school comes and helps.” Brittany discusses possible reasons why there is such low gender diversity in their dental hygiene program by saying “I don’t think males are ever told they can be dental hygienists, so they may not be told this can be a great profession for males too.” This is an interesting comment that a male student would need told he can be a dental hygienist, that it is assumed males do not think they can be dental hygienists. When discussing the lack of male dental hygiene instructors,
Jackie states “I mean I wouldn’t be surprised if they appreciated a few more men around. There is a lot of estrogen running around between faculty and students so a little more balance would be appreciated.” Brittany says “I think males can show us different ways to approach the patient, different ways to look at things.” So it seems that the female students see some added value of having a more diverse faculty. Caylee brings up an interesting point saying “I mean if there aren’t very many male hygienists then would there be many that would want to teach.” With low numbers of male hygienists in the profession are there enough qualified candidates to teach at dental hygiene programs. While gender diversity in faculty would be nice, is there enough males out there that want to come back and teach at these dental hygiene programs.

The gender diversity in almost all of the male study groups programs was very low with four of the five males noting they were the only male in their dental hygiene class. Paul was the only male to mention a staggering 10 male dental hygiene students in his dental hygiene class out of 48 students. For gender diversity in dental hygiene, having 20% males in the class is very rare. Chad says “I don’t think it is a profession a lot of males are drawn to because of the stereotypes and a female profession.” He goes on to say “If you look at photos of early hygienists, they are 100% females. So I think for a long time it was dominated by females and that has just washed away a lot of males that might have considered the profession.” Discussing the lack of gender diversity in dental hygiene, this male student seems to think stereotypes, perception of a female profession, and female dominance throughout history are partially to blame. The majority of male students described having no male dental hygiene instructors other than the dentist. With only one male dental hygiene instructor between four of the male students, most of these them are the lone male in their program with little to no male role models in their program. The one exception to lack of male role models in their program is Paul who states “ten altogether and five of them are males, so almost 50/50.” Paul says “I have admiration for I would say the male instructors, because I had this perception that because they were males they would be harder on us, but they treat us the same way.” Chad one of the students without any male hygiene instructors says “I would love it if
there was at least one male hygienist. That would be great, I wouldn’t feel as isolated or as alone in the program. It would help me feel almost more validated in my career choice. I would have a role model in a male instructor/hygienist.” With already an overwhelming number of females in the profession, some of these males entering their programs as the only male in the program can feel isolated and the presence of a male hygiene instructor may be all they need to feel like they belong there. This need for male role models has been identified in a previous study with male hygienists.3 “If men see more role models in the profession, then I think we’ll see more of them applying to dental hygiene programs.” Joe states “I don’t think it’s more or less the gender diversity, it’s that you have to have males to hire males.” He also goes on to discuss that his female instructors have been teaching or practicing dental hygiene longer than male hygienists, so he feels the female hygienists would be more qualified for these teaching positions. This was a surprising remark how few male hygienists he thought were out there that would have the experience required to teach at a dental hygiene program. Overall most of the male hygienists in the male study group mentioned a lack of gender diversity in their class as well as on their faculty. The one exception being Paul, whose program had 10 male hygiene students and 5 male dental hygiene instructors. Perhaps further evaluation of this program needs to be done to see how they were able to attract such a large number of male undergraduate students and male instructors to their program.

Comparing these results between the male and female study groups, we can see many similarities in gender diversity in their undergraduate dental hygiene programs. All but one student mentioned a low amount to no gender diversity in their dental hygiene classes. Almost all the students, male and female alike said they would like more gender diversity in their dental hygiene program with students and faculty. The male students did have more input on why they felt more gender diversity was needed. They mentioned things like the feeling of isolation in the program, need for male role models in the program, and seeing other males in the program to validate their career choice. Issues with isolation, lack of role models, and lack of other males in the profession to validate their career choice are all barriers to men represented by comments the male students
described when discussing gender diversity in their programs. In Table 1.1 represented in Appendix B, we can see that the overall percentage of male students is a respectable 8%, well above the national average. However without the high number of male students from Paul’s class that percentage would fall just short of 5%. These numbers show the dental hygiene profession continues to face gender diversity issues with an overall low percentage of male students entering dental hygiene programs.

**Recurring Themes**

We now have an understanding about the experiences each student interviewed about their thoughts and perceptions before and after they joined their dental hygiene programs. These experiences have shown many differences and similarities between the male and female study groups during their journey to become dental hygienists. In each of these previous discussion topics: Gender Diversity, Treated with Equality, Stereotypes, Hygienists Depicted in Images and Media, Initial Perception of the Hygienist, and Initial Concerns About Dental Hygiene, we are given a look inside just how different the male experience is from their female counterparts in the same profession. Their responses give us clues and ideas to why more men might not be sprinting to join the dental hygiene profession. Now how do these responses from male and female students compare to the list of recurring themes mentioned in the literature review? Is there anything that the male and female students mentioned in their interviews that can strengthen these arguments previous male dental hygienists and male nurses have made that may identify barriers to men entering these fields? Reviewing the female study group’s responses, there were four areas in which comparisons could be made to these recurring themes. These include: language/imagery in the profession, gender discrimination, stereotypes, and role Models/ isolation. Male students identified with these same recurring themes with the addition of visible/invisible, history of the profession, and fear of the unknown. Already we can see the male study group’s responses yielded comparisons to more categories from these recurring themes identified in the literature review.
Language/Imagery in the Profession

Describing how dental hygienists are depicted in images and the media, Jackie states “I would say probably blonde female in their early 20’s.” Others female students mentioned traits like pretty and attractive to describe the hygienists in these images. Three of the four female participants felt these were not accurate depictions of the dental hygienist, while one female student felt most of the time these images do accurately portray the dental hygienist. Many mentioned that the images don’t show what a dental hygienist actually does and inaccurately portray our role in the dental field. Jackie says “I don’t think it would be an accurate depiction, my current class is full of all races, genders, and we are all very different from one to the other.” The terms female or pretty and attractive are used when describing dental hygienists depicted in the media. Multiple females also state the media interprets the profession of dental hygiene as easy and its members are not very educated. In the case of The Bachelor television series mentioned by one female student, we can see represented in Appendix B Figure 1.1, an image showing dental hygiene listed with a group of made-up professions.\(^{39}\) Representations like this gives society the perception that dental hygienists require little education and make a mockery of our whole profession. With images and media perceptions like these, we can see why some undergraduate students may not be interested in applying to dental hygiene programs.

Male students also note that dental hygienists are being depicted in advertising and media as females. Three male students describe dental hygienists in these images as beautiful, pretty, and good looking. Matt even mentions “You really don’t see guys in the images, or at least I haven’t seen any.” Surprisingly three of the five males in the study said due to the female domination in dental hygiene they felt the images were fairly accurate. A few males describe dental hygienists representation in the media being completely absent. Mentioning they rarely see dental hygienists depicted in the media and when the media discusses dentistry in general they focus on the dentist. A lack of media representation and images littered with female dental hygienists is how males are viewing dental hygiene through these depictions of dental hygienists in media and
advertising. In some instances measures have been taken to help the perception of male nurses for recruitment efforts.\textsuperscript{20} Another campaign, undertaken by the Oregon Center for Nursing, uses a poster with the slogan “Are You Man Enough…to Be a Nurse?” Images such as these are used in recruitment efforts to remove the visual perception that nursing is only a female profession.

Female language or verbiage used to describe the dental hygienist seemed to not be prevalent in both male and female study groups. This had been a topic of discussion in multiple reports that dental hygiene and nursing programs needed to adopt gender-neutral language both in literature and lectures.\textsuperscript{8,16,20} Both study groups seemed to be on the same page with how images depicted dental hygienists. Images of nurses as angels, sex symbols, doctor’s handmaiden, and women are driven by values derived from Florence Nightingale and these images have been reinforced by mass media and leading to the continued perception of nursing as a feminine profession.\textsuperscript{20,38} This depiction of nursing as a female profession, just like dental hygiene is being driven by mass media and public perceptions. Almost all the students described the hygienist as female, pretty, and attractive. While they agreed on what the images showed, they did have a difference of opinion on whether or not these were accurate depictions of the dental hygienist. The male study group seemed to think the images are more accurate than the female study group suggests. Overall images of the dental hygienist still seem to give the perception that this is a female profession. It seems imagery in the profession has some effect on how the public perceives the dental hygienist and likely an effect on how male undergraduate students view the profession.

\textbf{Gender Discrimination}

Gender discrimination in dental hygiene programs as well as out in clinical practice was mentioned in the literature by multiple male dental hygienists.\textsuperscript{2-4,13} The female students in this study described no instances of gender discrimination through their experiences before or after they entered their programs. Each female student noted they had been treated with the same equality as other students in their program.
The men seemed to tell a different story than the women in this study describing many instances of gender discrimination. With all five male hygiene students describing being treated differently than other students because they were male. When describing concerns about dental hygiene before entering his program, Paul states “being a specific gender could be harder to find a job after school.” So before he even entered his dental hygiene program he felt male dental hygienists might be discriminated by certain employers. Judging by comments made by male registered dental hygienists in previous, perhaps barriers do exist to men looking for jobs after graduation.2-4,13 “My own dentist, a male, told me that he would never hire a male hygienist, stating that his patients expect female hygienists.2” Another male hygienists states “I had an office call the temp agency and cancel me clearly because they didn’t want a male hygienist.2” One male hygienist said “I worked for a dental temporary agency that told me that some dentists would request that the agency not send any black (people) or males.4” There was an instance where a male hygienists notes an office manager at a perspective employer told him that the male doctor would not want to hire him because he was a man.4 These and many other accounts describe a series of events where male dental hygienists were discriminated against when looking for jobs in the dental hygiene profession. Paul also describes in his own dental hygiene class that has 10 male students that he feels he is treated even better than the females in his class because they are afraid of losing any male students. While it is nice to see Paul is being treated well he is still being treated differently based solely on the fact that he is male in his dental hygiene program. Joel describes how new dentists seem to hire more males and older dentists mainly hire females. He felt older dentists seemed to discriminate against male hygienists more than newly graduated dentists. This perception came from his own experience trying to find jobs as a male dental assistant. This is twice, that male students in this study mentioned gender discrimination in relationship to securing a job after graduation. Joe says “Even when I was applying for the program, I had people telling me I would get in just because I was a male.” He says he didn’t want to get in because he was a minority and wanted to be accepted based on his own merits. Matt’s remarks from earlier in the paper noted
gender discrimination when directors of his program asked specific questions during his interview for the program about him being married, if he was okay entering a profession with mainly females, and if he planned on going on to dental school after dental hygiene. When he asked female students in his class about their interview questions, all thought it was weird he was asked these questions and told him that they were not asked any of those specific questions. A registered male hygienists notes similar questions from dentist’s wives who called prior to his interview so they could legally ask him questions whether he was married or had kids, basically inquiring about his sexuality. Other dental hygienists mentioned patients and employers that often asked if they had intentions of going on to dental school. Finally Chad states “I really feel like I am held to a higher standard than my classmates are.” Chad notes “it’s nice they feel I am competent but the downside is instructors are more disappointed when I don’t know something, more than they would be for another student.” These comments made by male students show gender discrimination in various aspects of the dental hygiene profession. Some were met with gender discrimination before they entered the program and others while in their dental hygiene programs.

The male students in the study described multiple facets of gender discrimination they have experienced during their short time in the profession. While some discrimination like Paul’s benefits him in his program, there are others that feel they stand out and feel instructors treat them differently than their female counterparts in their program in a negative way. Most of these accounts of gender discrimination happened while in their dental hygiene programs, so unless these students are voicing their concerns, many males might be unaware of these issues entering dental hygiene programs. A barrier to possibly more men viewing the dental hygiene profession are the initial concerns male students had about securing jobs after graduation because they were male. This is a preconceived notion that gender discrimination towards male dental hygienists takes place in the dental hygiene job market. For men looking at entering undergraduate dental hygiene programs, this can surely affect whether or not they want to apply to a program that upon graduation they may have difficulty finding a job because of their gender.
Stereotypes

Stereotypes can exist in almost any profession and the female students in this study seemed to mention a few that are fairly common in the dental hygiene profession. Many of the female participants described the stereotype that only women are dental hygienists. Julie says “growing up all the dental hygienists I knew were female, so that’s what you kind of stereotype them as. A couple of the students mentioned dental hygienists just clean teeth. This is a common perception that the public has of the dental hygiene profession. Hygienists as tooth polishers, not requiring a lot of education, or even a made up or imaginary job as the Bachelor television series would have people believe. In response to these view’s posted by ABC’s The Bachelor, ADHA president Jill Rethman outlines: Dental hygienists are required to graduate from comprehensive and demanding accredited educational programs in order to earn their academic degrees and as well as a national written examination and clinical examination to obtain a dental hygiene license to practice. The amount of hard work and dedication it takes to become a dental hygienist as well as the invaluable services they provide to enhance the oral and overall health of the American public deserves nothing but respect. This letter represents damage control by the profession to try and stop these negative stereotypes about dental hygiene from influencing the public’s perception of dental hygiene. While many of the students thought these stereotypes were false, it only takes a few dental hygienists that fit these stereotypes to influence the masses. Brittany says “I do feel they are female.” With 96.4% of the profession being female, there is some accuracy in the stereotype that dental hygienists are women.

The male students in the study seem to describe a few more stereotypes about dental hygienists than the female students, with the major difference being specific stereotypes about male dental hygienists. While the male participants mention the stereotype about the dental hygiene profession being for women, they are able to add specific experiences where this stereotype was brought up by patients. Matt describes “I still get questions from patients asking why would I choose this, only girls do this.” Other male registered hygienists have mentioned similar comments by patients in regards
“Some of them are likely to say, you know, I never met a male hygienist, or sometimes they joke about my appearance.” Another male hygienist describes a patient experience stating “Because I wasn’t a female, he just said I am not going to have a guy clean my teeth and turned around and walked out.” Joe says “A lot of people think that if you are going into a female dominated field then you are either like homosexual or something.” This isn’t the first time this stereotype has come up, as male dental hygienists and nurses both described this stereotype in different studies listed in the literature review. It is assumed that men who choose nursing are gay. A male hygienists states in an interview “I was asked how patients perceived me. I thought (the dentist/interviewer) meant did patients think I’m the dentist. I said I wear a nametag that reads registered dental hygienist below my name. He said, “No, Do they think you are gay?” Another male hygienist states “I think male hygienists are viewed as homosexuals. It is true there are homosexuals in dental hygiene, but the same is true in all lines of work. With this attitude or view, discrimination is applied.” Despite lack of evidence for this belief, men nurses are questioned about their masculinity and often feel necessary to justify their career choice. Unfortunately Joe is not the only one that has experienced this stereotype of male hygienists as homosexual. Another stereotype listed by multiple males in the study was about males being heavy handed. Chad describes a concern of his is “Patients may perceive the work I do as more heavy handed.” Matt states “As a male hygienist they automatically assume you are heavy handed. So that is something I am always trying to fight against.” These comments seem to generate the possibility of stereotypes having an effect on male students looking at the dental hygiene profession. Describing the lack of gender diversity in dental hygiene, Chad says “I don’t think it is a profession a lot of males are drawn to because of the stereotypes and a female profession.”

These results show us that both male and female study groups identified stereotypes about dental hygienists describing them as women and tooth cleaners. Some participants noted that the stereotypes about hygienists being female were true based on the amount of women in the dental hygiene profession. Unlike the stereotypes mentioned
that pertain to both male and female hygienists, males in the study described certain stereotypes limited to only male dental hygienists. Many of these stereotypes have been mentioned in other studies by male dental hygienists and male nurses as possible reasons to why more men don’t enter the dental hygiene or nursing fields.\textsuperscript{2-4,13,14} The stereotypes each of these males listed came from comments made by patients, instructors, and the public. It appears these stereotypes have given a false perception of dental hygienists to the public, which means now males entering the dental hygiene profession have to justify this career decision to patients, employers, family members and the rest of society. Matt even mentions in pre-interviews for his dental hygiene program the directors asked if he planned to go to dental school because they fail to retain male hygienists because they go to dental school after they graduate. The stereotype that men entering dental hygiene are only doing it as a stepping-stone to dental school coming from a director of a dental hygiene program only creates more of a barrier to men that are interested in dental hygiene. This same sentiment is represented in previous literature where a male hygienist states “I get asked a lot if dental hygiene is a stepping stone for me to continue on to dental school. Maybe as a man in a traditionally women’s profession, patients assume that I would not be content with my career choice.”\textsuperscript{4} These stereotypes depicting dental hygiene being a stepping stone for men to dental school only further the perception that dental hygiene is a female profession. The results have shown that stereotypes about dental hygienists can certainly be damaging to the profession and damaging to the gender diversity of the dental hygiene profession. Many comparisons have been made between stereotypes the students in this study listed and the stereotypes made by registered dental hygienists and registered nurses. These comparisons further the argument that stereotypes play a role in barriers to men entering the dental hygiene profession.

**Role Models and Isolation**

When it came to the topic of role models in the dental hygiene program and isolation issues, the female study group’s participants did not mention any feelings of isolation, nor did they mention a lack of role models. Two of the female students come
from schools with no male students or male dental hygiene faculty. The other female students noted they had 2 males in their class and only one male dental hygiene instructor. Jackie says “I wouldn’t be surprised if they appreciated a few more men in or around. There is a lot of estrogen running around between the faculty and students so a little more balance would be appreciated.” She eludes to the fact that maybe male students would appreciate having a few more male faculty members and increased diversity in their dental hygiene program.

The male study group mentions various times in their interviews where they have felt isolated or could use a male role model in their dental hygiene programs. With the exception of Paul, who has 10 male dental hygiene students in his class and a 50/50 ratio between male and female instructors, all other males in the study are the only men in their class. All but one of these male dental hygiene students had no male dental hygienist on faculty and the other male has only one male hygienist on faculty. Paul the only male with good gender diversity notes he has more admiration for his male instructors. Chad says “I would love it if there were at least one male hygienist. That would be great. I wouldn’t feel as isolated or as alone in the program. It would help me feel almost more validated in my career choice. I would have a role model in a male instructor/hygienist.” Described earlier a male registered hygienist noted if men saw more role models in the profession, then more male students may start applying to dental hygiene programs. A barrier noted to males in nursing describes social isolation as: Men aren’t encouraged to seek support from other male students, Few or no male faculty members are available, and there are few opportunities to work with male nurses in the clinical setting. Men report that often there are no other men in nursing classes, and at times they’re discouraged from participating in all student activities. Other nursing literature also states lack of exposure to male role models in the media as a perceived barrier to men in nursing. Another account in nursing describes male nursing students experience loneliness and isolation, which they associate with being men in a predominantly female environment. Chad seems to have hit on may points described as barriers to men stated in nursing and dental hygiene literature. When discussing
how the only male hygienist in his program had been like a mentor to him, Joe states “Seeing him and a male that had graduated from here, I was like this is something I can do.” Not only was this male hygienist on faculty, but he was the advisor for the hygiene students entering the program, providing a great visual to male students applying to the program that there are men in the dental hygiene profession. Joel describes his director of his program being his favorite instructor, stating “She’s the one that helps me out with my isolation problems with the one instructor. She listens to me and since she is the director, she can possibly do something about me not feeling segregated.” These statements from each male student in the study show isolation issues for male students exist in dental hygiene programs and in some cases having a male role model in the program can actually help lessen the burden and feeling of isolation.

Table 1.1 in Appendix A gives a look at the percentage of males in each of the student’s dental hygiene classes. From this table we can see based on the number of male students in each class that many of the male students may feel isolated with little to no other male dental hygiene students in their classes. The male students do seem to justify the barriers that other male hygienists and nurses have made about feeling isolated in their dental hygiene programs, as well as the inherent lack of male role models. The few males in the study that even had male instructors described admiration towards them or saw them as a mentor. Multiple studies described lack of male role models as a barrier to men in nursing and dental hygiene with one stating more male role models may increase the amount of males applying to dental hygiene programs.\textsuperscript{3,16,20} The visualization of more men in the profession and someone they can look up to could help more males enter the dental hygiene profession. One student mentions having a 50/50 ration of male dental hygiene instructors and his is the only class that shows a high percentage of males in the program. Eight of the nine students interviewed describe one or no male dental hygienist on their faculty. Quite simply many of these programs are not attracting any male instructors and therefore are ill prepared to offer male students a male role model on their faculty.
Visible/Invisible

There are a few recurring themes that were only identified in the interviews with male students. No females in the study identified with feeling more visible or invisible in their dental hygiene classes. There were however three male students that describe their experiences with feeling more visible to others in their dental hygiene program. Joe discusses “I’m the only male in my program right now, so everyone knows me here, which isn’t a bad thing.” While Joe doesn’t mind sticking out because he is the only male in his program and everyone knows who he is, there are others that would prefer not to stick out. Joel describes an instructor that singles him out. He says “I stand out a lot more to her, so I have to be 100% on my best behavior so I don’t stick out more.” Another male student that shares this sentiment is Chad who felt as though he was held to a higher standard because he was male. Chad states “Since I think I am held to a higher standard, instructors and students know I am competent, that puts me a bit on a pedestal. I noticed instructors expected me to know things, that I didn’t have any way of knowing, but they would turn to me. So on the downside they are more disappointed when I don’t know something than they would be for another student.” This concept of being more visible is outlined in nursing literature where one male nursing student states “They (faculty) pick you out in class a little more often and that’s just because we are more visible.” A white man nursing student became visible in a new and unexpected way when he entered nursing: “you become for the first time in your life a visible minority where everyone remembers your name, they remember what you say, they remember what you do, they have certain expectations of you based entirely on how you are and how you look.” These male nurses describe much the same problems that the male hygiene students have in their own dental hygiene programs. This shows how males can feel more visible to instructors than others in their class and sometimes get singled out because of it. These experiences by males represented in this study resemble the same thoughts and experiences described by male nurses. For males thinking about entering the dental hygiene profession, this becomes a barrier to selected students that may not want to feel like a visible minority in the profession. It gives the perception that
they will be treated differently in the dental hygiene profession because there are so few males.

**History of the Profession**

Again there were no correlations to history of the dental hygiene profession that could be made with any of the female participants in this study. There were two males that mentioned images seen in their program of the first dental hygienists that had an impression on them. Joe states “Our director had shown us pictures from when she was here and they had to wear white skirts and tops with the hats. They weren’t allowed to do certain things like we are now. Now we wear gender-neutral black scrubs.” Chad stated “If you look at photos of early hygienists, the pictures show 100% females. So I think for a long time it was dominated by females and that has just washed away a lot of males that might have considered the profession.” Images and a history of female dominance can certainly add to the public perception of the dental hygiene profession. Nursing literature has also touched on the history of its profession being a barrier to men. Historical events and influential people such as Florence Nightingale hold significance in contributing to some of the dilemmas men in nursing face. Their historical association with nursing indicates that for centuries they have played an important, albeit invisible, as nurses. This invisibility has contributed to the ideological designation of nursing as women’s work and played a major role in excluding and limiting men’s full participation in the profession. These examples from nursing literature describe how the history of the profession has shaped and fostered the perception that it is a female profession. The males in this study describe this same phenomenon causing many to think dental hygiene is a female profession. It is important to note that each student was asked if they had knowledge about the history of the dental hygiene prior to entering their program. Each student said they had no knowledge about the history of the dental hygiene profession. While these couple remarks show reasons to why history of the profession could be a barrier to men in dental hygiene, it may just be a history of female dominance that represents a barrier to men rather than the complete history of the dental hygiene profession.
Fear of the Unknown

Fear of the unknown is a topic multiple male registered dental hygienists have made when describing situations in which dentists, patients, and employers have not wanted a male hygienist simply because they have never had one before.\textsuperscript{2-4,13} The only participant in the study to mention this phenomenon was Joel. When describing his concerns before entering his dental hygiene program, he says “A lot of new dentists seem to hire more male hygienists compared to older dentists that mainly hire females.” This perception came from his experience looking for a dental assisting job, where he found certain older dentists would hire female assistants over him. A male hygienist states “My own dentist, a male, told me that he would never hire a male hygienist stating that his patients expect female hygienists.”\textsuperscript{2} Another male hygienist describes an office manager telling him that the dentist would not want to hire him because he was a man.\textsuperscript{4} One male hygienist describes a local agency telling him the doctor had said the patients would not be comfortable with a male hygienist.\textsuperscript{4} There was also an instance where a man walked out of the dental office stating he wasn’t going to have a guy clean his teeth.\textsuperscript{13} These are all instances where male hygienists have noted dentists, office managers, and patient reactions to a male dental hygienist and made decisions not to hire or be seen by the male hygienist due to fear of the unknown. Most of this can be grouped into gender discrimination, but a lot of that discrimination has to do with patients and doctors just not knowing what it would be like to have a male dental hygienist. Only one other male student mentioned his initial concern for finding a job after graduation. While this is an isolated experience in this study, it came from a student that had already worked in the dental field and experienced gender discrimination as a dental assistant in the dental profession. Concerns about procuring a job after graduation can weigh heavily on a student deciding on whether to enter a specific major. Men who hear that dentists may not want to hire them because they are used to hiring female dental hygienists may look for a profession where their gender is not an issue.
Limitations

A limitation to this study was sample size, with only 9 first year dental hygiene students represented in the study. This makes it difficult to generalize the results to every dental hygiene program. The relatively small sample size is fine for this study due to the qualitative nature of the study. This qualitative study is meant to develop ideas and help identify barriers to men entering undergraduate dental hygiene programs. Future quantitative research will be able to expand upon these barriers identified in this study. In qualitative research there is not a large sample size because the focus is more on saturation of individual results. As each student was interviewed, common themes became more prevalent and until saturation was reached. As more students begin to identify with the same common themes, there is a point where results become saturated and no further participants are required. The sample identifying barriers to men entering undergraduate dental hygiene programs was limited to only the perceptions of first year male and female dental hygiene students. Future studies may want to include male dental hygiene students that dropped out of the program and male students that chose to apply to other health related programs instead of dental hygiene. Future studies could also sample students that were accepted into dental hygiene programs and chose not to enroll. The length of the recorded interviews was also a limitation to this study. Many first year dental hygiene students busy schedules with school and work made it difficult to find time to complete 30-minute interviews. Future research could improve on the length of time needed to interview students. A limitation in scheduling interviews was identified based on the availability of students and interviewers in this study. Future studies should take into account interviewer availability to more easily complete and schedule student interviews. Another limitation to the study was the recruitment of first year dental hygiene students through letters emailed to dental hygiene program directors. Few students responded to multiple emails sent to program directors enlisting in their help finding participants for the study. Reliability of the students to respond to recruitment letters also identifies a limitation in sample selection bias, where only students interested in this topic would care to participate in the interview process. This recruitment method
was also limited by reliability of both program directors to forward the letter to first year dental hygiene students and by reliability of students to respond to the email. Recruiting first year male dental hygiene students posed a unique limitation due to the limited amount of males in dental hygiene programs. Help from a male dental hygiene social media group was enlisted to help find male participants. Future studies will need to improve upon recruitment techniques in order to achieve an adequate sample size.

**Conclusion**

Setting out to identify barriers to men entering undergraduate dental hygiene programs and whether male and female opinions differed on whether these barriers exist was studied in these interviews with first year undergraduate dental hygiene students. While students were not asked directly whether any of these barriers to men existed that prevent males from entering undergraduate dental hygiene programs, their perceptions of dental hygiene and their experiences in their own dental hygiene programs gives us a look at how barriers to men entering these programs may have developed.

These interviews showed a difference between male and female dental hygiene student’s experiences before and after they entered their programs. While many females noted no concerns entering their dental hygiene programs and felt they were treated with equality once in their programs. The male students mentioned multiple reasons to why they had gender concerns entering their programs and were met with gender stereotypes, discrimination, isolation, and lack of role models while in their dental hygiene programs. Now where there were many areas in which the male participants differed from the female study group, they did come together on many topics on how dental hygienists are perceived by the public and seen in images and media outlets. In both study groups these initial perceptions and images of dental hygienists create the illustration of young, beautiful, female dental hygienists that just clean teeth. Imagery and the media feed the public perception of dental hygiene, it is through these images and public perceptions that a barrier to men entering the profession is created. Experiences of male students in this study only strengthen the argument that recurring themes such as imagery of dental
hygienists, gender discrimination, stereotypes, lack of role models, isolation, visibility in the profession, fear of the unknown, and history of the profession may in fact be barriers to men entering the dental hygiene profession. Public perception fueled by stereotypes, female model-like images of dental hygienists, and a history of female domination in the profession seems to be perhaps the biggest barrier of all. A response from Joe, describes this by saying “It’s still a female dominant field, so females are going to dominate, but other than that I think that there really aren’t that many men out there that want to or are comfortable enough to pursue something they are passionate about, instead of what the public thinks they should pursue.” While we can not definitively say these barriers exist, Based on the male students in this study, each of these barriers mentioned can contribute to male perceptions of the dental hygiene profession, which ultimately leads to so few males entering undergraduate dental hygiene programs. More research is required to identify barriers to men entering undergraduate dental hygiene programs and whether or not their existence limits the amount of males in the dental hygiene profession.

A few critical suggestions can be made based on the findings in this study to help with recruitment of men into the dental hygiene profession which will help grow, strengthen, and enrich the diversity of the profession. Changing the public perception about dental hygiene is paramount in being able to move away from these stereotypes that dental hygiene is easy, doesn’t require a lot of education, they just clean teeth, and it’s just a “pretty girl job.” This can be done through promoting the profession and public awareness efforts through advertising and media outlets. Many social media sites have fan pages with millions of followers. The dental hygiene profession should be tapping into these resources and using these sites to inform the public what their role in the dental field is and to make efforts to represent diversified images of dental hygienists. This allows the profession to dictate how the public views them, rather than letting others make those misguided representations of the dental hygiene profession as seen in figure 1.1. Secondly we need to rid the classroom of gender-biased language and feminine verbage used in dental hygiene programs. The use of professional development courses focused on gender-neutral language in the classroom should be utilized by dental hygiene
faculty members. This will help the profession from perpetuating gender stereotypes in the classroom, leading to less isolation and invisibility of male dental hygiene students. Another suggestion for the dental hygiene profession is to focus on recruitment efforts of male students and instructors to increase diversity in the classroom and the profession. Many dental hygiene programs have strict guidelines and admissions policies making it hard for some students to get accepted into such a competitive program. For the sake of increasing the diversity in the profession, a holistic admissions policy can be used when looking at male applicants to these programs. This will allow the admissions committee to look at other factors aside from metrics that can dictate their acceptance into the program. These are all areas in which the dental hygiene profession can work on to help break down barriers to men in the profession and help attract a more diverse group of students to undergraduate dental hygiene programs.
Bibliography


Appendix A

Table 1.1

Percentage of Males in Each Program

<table>
<thead>
<tr>
<th>Students</th>
<th>Age</th>
<th>Gender</th>
<th># of Males</th>
<th># of Total Students</th>
<th>% of Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jackie</td>
<td>33</td>
<td>Female</td>
<td>2</td>
<td>20</td>
<td>10%</td>
</tr>
<tr>
<td>Caylee</td>
<td>25</td>
<td>Female</td>
<td>0</td>
<td>18</td>
<td>0%</td>
</tr>
<tr>
<td>Brittany</td>
<td>40</td>
<td>Female</td>
<td>2</td>
<td>19</td>
<td>10.5%</td>
</tr>
<tr>
<td>Julie</td>
<td>21</td>
<td>Female</td>
<td>0</td>
<td>18</td>
<td>0%</td>
</tr>
<tr>
<td>Paul</td>
<td>35</td>
<td>Male</td>
<td>10</td>
<td>48</td>
<td>20.8%</td>
</tr>
<tr>
<td>Joel</td>
<td>22</td>
<td>Male</td>
<td>1</td>
<td>14</td>
<td>7%</td>
</tr>
<tr>
<td>Joe</td>
<td>23</td>
<td>Male</td>
<td>1</td>
<td>32</td>
<td>3%</td>
</tr>
<tr>
<td>Matt</td>
<td>31</td>
<td>Male</td>
<td>1</td>
<td>30</td>
<td>3%</td>
</tr>
<tr>
<td>Chad</td>
<td>36</td>
<td>Male</td>
<td>1</td>
<td>17</td>
<td>5.8%</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td></td>
<td></td>
<td><strong>18</strong></td>
<td><strong>216</strong></td>
<td><strong>8%</strong></td>
</tr>
</tbody>
</table>
Appendix B

Figure 1.1: Illustration of Dental Hygienists

ABC’s The Bachelor’s View of Dental Hygienists