

PRESCRIPTION FOR DOCTORS:
AN INTERPRETIVE ANALYSIS OF MESSAGES PORTRAYED BY WEBSITES
TARGETING POTENTIAL MEDICAL STUDENTS

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Kelly Oehler
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COMMITTEE MEMBERS

Committee Chair: LaKesha Anderson, Ph.D.

Assistant Professor of Communication

Indiana State University

Committee Member: Shana Kopaczewski, Ph.D.

Assistant Professor of Communication

Indiana State University

Committee Member: Lori Henson, Ph.D.

Lecturer

Indiana State University

ABSTRACT

This study examined communication about medical professional career decisions as depicted by 10 popular websites. Qualitative research methods, phenomenology and hermeneutics, were used to investigate these messages. Findings revealed a difference between medical community authors and layperson authors. Authors associated with the medical field shared overall positive messaging while authors not associated with the medical field leaned toward a negative presentation of information. The divide was most prominent when the role of advising was introduced. Topics discussed in the research included making the choice to enter the medical profession, level of intelligence of medical students, personality traits, financial incentive, continued education, and life after graduation. The results of this study provide implications for future research for examining a possible connection between messages portrayed by popular search results and America's physician shortage. A detailed discussion of findings and suggestions for further research is presented. The author's own experience is incorporated into the analysis.

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CHAPTER 1

INTRODUCTION

The medical field is an experience all humans share either as a patient or as a practitioner. As medical care reform continues to be a regular issue in broadcast media, curiosity surrounding the field swarms. Americans face a critical shortage of doctors, as many as 91,000 by 2020 (Hinkley, 2013). This shortage stems predominantly from the aging baby boomer population coupled with an influx of 30 million Americans into the healthcare system under the Affordable Care Act. The need for medical practitioners is immense and understanding the motivation for individuals considering the medical field helps ensure information seekers' needs are met. Decision-making is almost always limited by the accuracy and comprehensiveness of the information that the decision depends upon (Laker, 2002) thus making it important to understand the information presented to potential students.

The Internet is readily accessible from a variety of devices that are at the disposal of the majority of Americans. Pew Research Center's Internet & American Life Project (2013) reports that the majority of American adults (56 %) own smartphones. This grants instant access to various print directories and guides that serve as customizable, one-stop search portals, providing fingertip access to degree and program information, career guidance, test preparation materials, advice on resume writing, and additional information (Gust & Flynn, 2005). The terms 'webcounseling' and 'cybercounseling' are becoming familiar as an increasing number of credentialed and non-credentialed career counselors move to practice online (Oravec, 2000).

The adoption of technological advances such as smartphones has made computer-mediated communication (CMC) more salient than ever. With web access in the palm of users' hand, it is an easy resource for information seekers exploring professions. CMC allows the user to choose the level of interaction that is appropriate for addressing his or her level of inquiry. Those who have no knowledge of the medical profession can engage in a low level of interaction by seeking general information on the Association of American Medical Colleges (AAMC) website. After searchers becomes more knowledgeable, they can engage in a higher level of interaction by visiting the Frequently Asked Questions section (FAQs) that mimics a conversation between an expert and an advisee. Finally, the advisee then has a plethora of choices of engaging in questions that arise from researching by sending an email to the AAMC, video conferencing with a medical profession who has contact information listed, or engage in a discussion board with other potential medical students. CMC allows each person to customize what level of interaction is most appropriate to them without being limited to resources within a geographic area. Information instills the material needed to lay a motivational foundation for beginning the journey of becoming a medical practitioner.

This study focuses on the messages displayed on websites targeting potential medical students and the implications of these messages on students' decision of whether or not to enter the medical field. In Chapter 2, I share my personal narrative about my exposure to the medical field and experiences conducting research on entering medical school. In Chapter 3, I provide a review of the literature regarding allied topics associated with this study. Literature in regard to the relationship between career decisions, particularly entering medical school, and Internet use are examined. Especially delving into how career decisions are made, the Internet's influence on profession selection through computer-mediated communication and finally motivations for

entering medical school. The literature review drives three research questions which are also outlined in Chapter 3. Chapter 4 describes the qualitative framework used to answer the research questions. The findings of this study and discussion of those findings are offered Chapter 5. The findings and discussion are integrated into one chapter to evoke a highly focused presentation of the most salient findings. This strategy also eliminates repetition of findings and provides a more conversational read with an emphasis on my voice. Finally, Chapter 6 provides discussion of the limitations of this study as well as recommendations for future research.

CHAPTER 2

PERSONAL NARRATIVE

I have never had health insurance. I have never had a family doctor. The one time I went to the emergency room I was six years old with a temperature of 105 degrees and was suffering from scarlet fever in addition to pneumonia. My lack of experience within a medical setting all changed in December of 2013.

Filled with holiday spirit I strolled into my parents' home wearing a Christmas sweater and an arm full of presents, humming "Silent Night." I was shocked that I was not greeted by my puppy. This was the routine of walking into the house since I adopted the dog when I was 13. Part of me was torn, thinking it was a sign that something was wrong, but I disregarded my fears and convinced myself that the pup must be running around in the backyard. All my thoughts came to a screeching halt as I walked into the living room to see a sight I will never forget.

My mother had been missing for hours. Her leaving the house for the majority of the day was nothing out of the ordinary because she did not have a car. Luckily, she lived in the middle of town and could walk a few blocks down the alleys with a suitcase she had dug out of the trash to get groceries. Not the groceries normally purchased at a store. The beat up suitcase would be packed to the rim with the only essential supply, alcohol. My mother has been an alcoholic as far as my memory allows. In fact, I have never seen my mother sober in my entire life. She will take great strides, to the extent of pawning her wedding ring, for her daily case of Milwaukee's Best Ice.

When my mother initially went missing it was not a huge concern to my father. However, with record cold temperatures expected, any time spent in the elements was a risk to my frail mother. While the 100 plus year old home my parents reside in is only heated by using a few space heaters, a redirected dryer hose, and the oven, at least it provided safety from the cold and wind. My father stated she stumbled back into the house just minutes before I came home. I told her I was coming home at 5:30 pm. According to my father, she returned just three minutes prior. As he shared this information, I stood in the doorway of the living room and the world began to slow down around me as I looked at my mother. Due to her alcoholism, and other destructive life choices, she has never truly looked healthy. She weighs no more than 100 pounds and has frail bones visible under her thin layer of skin which is always covered in bruises and scrapes.

But today, her skin did not look just unhealthy; it looked like it belonged to a corpse. She sat on the couch, her mouth slightly open, drool running down her gray skin. Her skin was as gray as the winter clouds that threatened a storm outside. Her eyes appeared to have no iris. Rather, her eyes looked like polished black stone grasping for any shard of light they could possibly find. Finally I caught a glance of the fresh blood that was running down her violently shaking hands. Her frail body felt weightless in my arms as I rushed her into the back seat of my car and sped to the emergency room. My first real encounter with the healthcare system was about to begin.

As I sat in the emergency room, I prodded my mother to find out what had happened. The nurses asked her questions in a condescending tone that did not encourage her to speak, and most certainly did not invite the truth as to how she got to her current state. However, the emergency room doctor was extremely compassionate and understanding. He looked through some files and discovered that my mother had attempted suicide exactly a week prior; however she was

intoxicated so the threat was not taken seriously. After her blood alcohol content was under the legal limit, the hospital had her sign a contract that stated she would not hurt herself and released her within a few hours.

This time was different. The only thing in my mother's system was an entire bottle of pills. She did not have any alcohol in her system because she did not have the funds to purchase any. She was so medically unstable that the doctor transferred her to the intensive care unit. When I asked the emergency room doctor what the protocol was for a suicide patient, searching for answers as to why she had been released a week before without any continued care, the ER doctor simply said, "she was drunk, people do things they do not mean when they are drunk." It turns out she had the same nurse a week ago, that nurse had no idea that my mother is a functioning alcoholic, therefore, the amount of alcohol in her system would have no effect on her decision making due to her high tolerance. The week prior, no mental health evaluation was conducted and she was released as soon as she was medically cleared. I asked what information the nurse was able to gather the previous week and her response was "she did not seem like she wanted to talk so I did not press her." It struck me as odd that in a life or death situation, my mother was not pressed for information about her mental state or overall health.

Six days later in the ICU, my mother was medically cleared on Christmas and a mental health practitioner is brought in to evaluate my mother to determine if she should be released to a long-term rehabilitation facility. Every person who encountered my mother in the ICU provided the same written recommendation, that she spend six months in an in-patient facility due to her addictions and mental health issues. Yet, my mother was not sent to an in-patient facility because according to her mental health evaluator "she does not have health insurance so I would not be able to find her a facility and she has no desire to go." The benefit of six days of withdrawal, so

severe that seizures came like clockwork, was erased that day when she returned home and continued her self-destructive behaviors.

I am not a medical practitioner, I do not know anything about the profession but I felt a few communication mistakes occurred during my mother's hospital visit that assisted in her spiral back into a destructive lifestyle. People are responsible for their own choices but I am left wondering how long-term care may have impacted her lifestyle and if better communication among those who cared for her would have impacted the efforts of the mental health evaluator to find her a treatment facility. Feeling helpless and overwhelmed with the thought of people who need help with addiction but are often dehumanized for their lack of insurance and social status, I turned to the Internet and began searching "How to become a Doctor?"

I toy with the idea of entering the medical field because of my week-long-crash-course with the medical field. Entering medical school, especially as a career change, is a decade long commitment but comes with the rewards of enriching a patient's quality of life each and every day. As a child and young adult, I never considered the medical profession because neither of my parents attended college, my mother did not even make it through high school. No person in my family is involved in the medical field and I had never been exposed to medicine.

I was encouraged to find a job that could pay the bills as soon as possible. There was no time or funds to waste on eight years of college. In my limited exposure to the medical field, all I knew is that to become a doctor, you needed to go to school for a long time and the education came with a price tag that equaled more than my parents had seen in my lifetime. In hindsight, it seems overly simple. But before having access to the Internet to seek information about the medical field, my construct of the world was shaped by people that had the mindset that because the packs of cigarettes on the stack of disconnect notices was full, it was a good day.

I choose to research on the Internet because I did not know the first thing about the field. I was terrified to go to the hospital and ask basic questions if I could find the answers to on my own. The Internet allowed for me to consult many sources and compare and contrast information. Not to mention the Internet could not scoff at my need for answers to basic questions.

In my very initial stages of research, I was very open and impressionable to all the information that appeared on my screen. I was disheartened to see that my search "How to become a Doctor" yielded two articles by reputable broadcast outlets titled *Reasons not to become a Doctor* and *1 Million Dollar Mistake: Becoming a Doctor*. Other sites left me with mixed emotions, some sites discouraged me because they spoke of the extreme challenge of paying for medical school and graduating with nearly a quarter of a million dollars in debt. I also came across multiple sources that strongly discouraged working while in medical school because of the amount of time and energy it takes. It was so foreign to me to even contemplate the idea of not having a job and only attending school considering my work history. I have always made both possible using time management and a few sleepless nights. Yet at the same time, I wondered how incredible it would be to be able to just be a student of an occupation that saves lives and not need to balance school and work.

When looking at the course requirements for admission to medical school, I suddenly felt intimidated because I did not have a pre-medical or hard science undergraduate degree. Also, I did not come from an affluent family and was unsure how I would support myself even if I made it to medical school. In high school I was far from being valedictorian. This did not change as an undergraduate. Life came before school. I have always worked two jobs since age 14 because

paying the bills took precedence over staying up late to study for a test I knew I could pass without preparation.

The mixed messages found online about entering the medical profession left me questioning how many potential medical students had the same experience I did. I wondered if the messages on these sites prohibit potential doctors from entering a field that is in desperate need of professionals. Thus, the impetus of this thesis is driven by my own personal experiences with the medical field.

CHAPTER 3

LITERATURE REVIEW

This chapter serves as a summary of literature in regard to the relationship between career decisions, particularly entering medical school, and Internet use. First, the review delves into how career decisions are made, elaborating on individuals continued draw toward historically gender specific fields in addition to how gender plays a role in the career decision-making process. Next, the Internet's influence on profession selection and integration in modern society's daily lives is examined. Finally, motivations for entering medical school are inspected. Motivations reveal a link between early exposure to the field of medicine in relation to the decision to enter medical school in addition to barriers of entering the field and a desperate need for diversity in medical schools to fulfill the shortage of doctors in the professional field.

Career Decisions

As an American one of the first questions you are asked after being introduced to a complete stranger is "What do you do?" The emphasis placed on what a person does for a living is overwhelming in American culture and can impact an individual's overall quality of life. Well-being is found to affect motivation in daily work and overall career; decreased well-being leads to feelings of ambiguity about career choice and improved well-being leads to excitement and interest in career choice and can improve one's passion for work (Ratanawongsa et al. 2008).

Bandura (1977) details four sets of factors that influence career decisions. These areas include; genetic and cultural factors, environmental conditions and events, learning experiences, and task approach skills. Environmental conditions are the economic and geographical climates within which individuals live and range from influences. An example of outside influences is the outbreak of war or a milder event such as the induction of tablets to replace textbooks in the classroom. Learning experiences are the infinite number of events, both direct and vicarious, which influence our lives. Experiences can vary wildly in influence and cause, such as going to hospital with a severe injury or being bullied in gym class.

Genetic and cultural characteristics entail ability, disability, ethnicity, gender and physical appearance (Bandura, 1977). Included in this factor is the impact of positive, high-quality role model relationships, which have been shown to benefit students in career decisions (Bandura, 1977). Despite lack or ample amount of these factors, an incredible amount of college students are uncertain about how to establish a professional career (Laker, 2002). Even individuals who have made their career choice still struggle with career identity. Molnar (2006) explained that 21.1% of the medical students he surveyed had serious doubts during their studies about the correctness of their choice of career. However, 77.9% of students would apply to medical school again if they were forced to make a career choice. Gender is also relevant to the decision-making process. Males and females feel pressured to assimilate to careers classically labeled toward a gender. There is also pressure placed on individuals attempting to balance different areas of their identity such as career and family.

Gendered Career Decisions

The role of gender in occupational choice has been studied in a range of fields, including cognitive psychology, counseling, education, organizational behavior, and sociology (Smulyan, 2004). Quantities of collective perceptions have materialized from studies within this variety of disciplines, despite different approaches and frameworks of analysis. Smulyan (2004) describes three interrelated themes that emerge from literature which are the continued dichotomy between male and female career choices; women's experience of the conflicts between career and family; and the exploration of alternative definitions of success, career, and career path occurring as women and men negotiate these tensions.

Undoubtedly women have greater career ambitions and have moved into a much broader range of jobs and careers in the last forty years. The upper echelon of the medical field, physicians, is a prime example. Forty-eight percent of students who graduate from medical school were female in 2012 compared to just 9.2% in 1971 (Association of American Medical Colleges, 2014). Women appear to be redefining personal and professional success in ways that challenge previously male determined constructs (Phillips & Imhoff, 1997). Despite the gender desegregation that has occurred, women still dominate within certain traditionally female careers, while men converge on traditionally male careers (Smulyan, 2004). For example, regardless of the dramatic increase in the number of women who have graduated from medical school, they still are drastically outnumbered when it comes to leadership positions in the field. Women accounted for just 22% of division chiefs in 2011 (AAMC, 2014). Explanation for the continued dichotomy in male and female career patterns focuses on how social norms and discourses of femininity lead women to construct selves that continue to value certain traits, such as a sense of self as helper rather than leader, as warm rather than ambitious, as emotional rather than rational, and as passive and deferential rather than active and independent (Smulyan, 2004).

Studies that look into gender differences in motivation for medical careers found stark differences in incentive. Males report interest in science being indispensable and career security as the most important reasons for exploring medicine as a career (Kusurkar, 2011). Females overwhelmingly reported helping people as the most important reason, followed by having a career. Females were oriented towards altruistic motives while males were oriented towards financial security (Kusurkar, 2011).

Despite gender, each individual must discover his or her professional calling. Career decision is not distinctive from any other form of decision-making. Most educational institutions are not oriented to helping their students validate their career-related decisions but rather concentrate on preparing them with the necessary education, skills, and experience to be a competitive candidate for their chosen career (Laker, 2002). This leaves students with an interest in the field to turn elsewhere for answers.

Computer Mediated Communication

Globally, the Internet has transformed the activities of daily communication in professional, educational, and interpersonal realms (Castells, 2004). Computer-mediated language research was pioneered in the late 1980s with the onset of personal computers. However, major research in the field has only become prominent within the last 20 years. Beginning areas of inquiry swarmed around a fascination with superficial structural features, such as acronyms, abbreviations, and emoticons that purportedly characterized computer-mediated communication (Reid, 1991). Computer-mediated communication (CMC) is a process in which human data interaction occurs through one or more networked telecommunication

systems. A CMC interaction occurs via various types of networking technology and software, including email, chat, instant messaging and mailing list servers. This form of communication can occur through any type of technological device that is equipped with this software.

Computer-mediated communication is divided into synchronous and asynchronous modes. In synchronous CMC, all participants are online simultaneously. This type allows parties to interact with one another in real time. In asynchronous communication, there are time constraints on communication messages and responses, such as with emails. Vital CMC features include conversation recordability, formal communication, and user identity anonymity, depending on software/device type.

Computer-mediated communication has its limitations as well as its benefits. There has been extensive conversation about the advantages and disadvantages of CMC. The transition to the high use of this form of communication, aside from the influx of the advancement in technology, is likely that it transcends geographic location. CMC allows participants to communicate from any part of the world, at any time, as long as the appropriate technology is available. The largest disadvantage to CMC is that it is a more lean form of communication, meaning the lack of verbal and nonverbal cues that take place in face-to-face communication can lead to misinterpretations and message confusion.

Advice-giving and advice-seeking are common practices of daily human interaction. In recent decades, the Internet has been adopted by professionals and nonprofessionals alike for imparting knowledge, support, and advice-giving (Virtanen et al., 2013). Advice is not a new subject in the context of research. Its practice and implications have been examined across a genre of outlets. Core research stems from either face-to-face interaction or print data, specifically the printed text type of advice columns. Aside from the field of speech act studies,

the literature on face-to-face advice has mainly focused on institutional context rather than on peer-to-peer advice (DeCapua & Huber, 1995). Examples include visits by health care nurses to first-time mothers (Heritage & Sefi 1992), HIV counseling sessions (Silverman, 1997), and medical encounters in general (Leppänen, 1998).

These studies show that individual types of advice-giving vary by case. In the words of Leppänen (1998) “the study of advice should both carefully explicate the details of the production of advice and show how these details are systematic products of the interactants’ orientations to specific features of the institutions.” Leppänen’s (1998) recommendation places the study of advice firmly within the field of pragmatics. Pragmatic communication is the use of a set of sociolinguistic rules related to language within a communicative context; meaning, pragmatics is the way language is used to communicate rather than the way language is structured (Ciccia, 2001).

The study of advice-giving within pragmatics is a concept widely supported by scholars. Searle (1969), for example, contrasts advising with the speech act of requesting and makes the point that advising “is not a species of requesting. ... advising you is not trying to get you to do something in the sense that requesting is. Advising is more like telling you what is best for you”. This comparison shows that advice is weaker in its directive force than requests. The speech acts of assessment and judgment are also closely connected to advice, since advice-giving recommends a future action. Thus advice-giving is characterized by a combination of assessing, judging, and directing (Virtanen et al., 2013).

Silverman (1997) supports that non-personalized information can be interpreted as advice in the appropriate context. During his study of HIV counseling sessions, he identified “Advice-as-Information” sequences. These sequences are when the counselor gives general information

on HIV and AIDS prevention without customizing it to the counselee's particular needs. This allows the advisee to interpret the text as relevant or non-relevant for others rather than conducting self-evaluation. Silverman found that delivering information in this manner is claimed to be less face-threatening to the advisee.

Considering that advice is neither linguistically pre-determined nor contextually tied to only one type of interaction, we can expect advice on the Internet to occur in numerous formats. In terms of technological format, it is clear that any form of web technology can be utilized to project advice to large audiences. Providing this advice can occur in a variety of formats. One exchange is asynchronous, which includes email exchanges or forum posts. There is also synchronous CMC that manifests in the form of chats, often designated as a support group. As advice functions, Griffiths (2005) claims that there are three primary functions of information and advice sites: "(1) information dissemination, (2) peer-delivered therapeutic/support/advice (such as self-help support group), and (3) professionally delivered treatment." The range of advice that can be sought on the Internet is extensive spanning professional advising to support groups or blogs written by professionals or even middle school students. As far as areas of content, there is no limit to the subjects that searchers can seek counsel or support for. Consider just the area of symptom checking. One website, Mayo Clinic Online, offers a list of hundreds of generic symptoms and potential causes for those symptoms.

Professionals use the Internet to reach their target audiences, be this to support customers, to sell products or to improve public knowledge, such as in the area of guidance counseling for potential medical students. For example, the American Association of Colleges of Osteopathic Medicine offers extensive advising for students on how to pursue a career in medicine. Covering

topics such as becoming an Osteopathic Physician, shadowing, training, general admission requirements, and licensure. The resource also provides a list of websites that potential medical students can consult for even more extensive research. A list of websites for the Internet is also used by non-professionals who reach out to their peers in order to offer advice and support. For example, the John Hopkins School of Medicine offers a medical student support group that offers an online forum so that students are not limited exclusively to the university's medical community.

The types of advice on the web differ in the degree of interactivity. While some sites function based on the exchange of texts by an advice-seeker and an advice-giver (Q&A style forms), there are also sites that offer advice and information in a less reciprocal way. These sites compile general information according to the experience the advice-giver has gained over time and adds components that mimic potential inquires. An example of a site that functions in this format is the American Medical Association. It offers general informative summaries about the process of entering medical school in addition to continuing medical education. Additionally, there is an extensive amount of advice sections such as “How Do I Decide if a Career in Medicine is Right of Me?” Finally, the Frequently Asked Questions sections (FAQs) imitates interactivity, in the sense that the reader is invited to regard the questions as coming from the readership and the answers as given by experts. Although the questions themselves are likely to be phrased by the advice-giving team, they can still be assumed to reflect the concerns of the target audience, since it is the experts’ strive to cater to this segment. It is commonplace for sites to combine interactive or mock interaction components.

One of the foundational studies in the area of CMC environments was conducted by Kern and Chun. Kern (1995) quantitatively assessed the impression that foreign language students

produce more language output in a CMC environment that they do in large group face-to-face classroom setting. Learning a new concept is similar to speaking a foreign language. The jargon used by those in the medical field is language exclusive to the practice. When searching “How to become a Doctor,” the inquirer will encounter this terminology and be left with questions. According to Kern’s findings, students who have a language barrier are more engaging in an online forum thus some potential medical students would feel more comfortable communicating questions or engaging in chat discussion because of the online setting.

Kern’s findings were supported by the Chun’s (1994) examination of fourth-semester German students. Chun’s (1994) research revealed that CMC promoted increased morphological complexity and a greater ratio of complete thoughts in written coursework over the timeframe of one semester. Her findings suggest that a potential medical student would be able to develop more thorough questions through CMC as opposed to face-to-face counseling when seeking advice on entering the profession. Complete questions ensure that students are receiving answers accurate to their areas of inquiry. Research instills the material needed to lay a motivational foundation for beginning the journey of becoming a medical practitioner.

Motivation and Motivating Factors of Medical Students

Bandura (1977) discovered three motivating factors as to why people choose to enter the medical field, specifically as a physician; early motivation, inhibitory factors, and facilitating factors. However, Powell (1987) found in a study of medical students’ perceptions of medicine and its specialties, altruistic motivations were overshadowed by a desire for prestige, money and success. In contrast to this, Crossley (2002) found medical students have purely altruistic motivations.

Still yet, Kusrkar (2011) reported that different intrinsic motivations, namely interest in medicine and learning, achievement and workplace utility, and extrinsic motivations, namely social competition or pressure and assessment, stimulate learning in medical students. For other students, their motivation for practicing medicine stemmed from early exposure to the field. Early contact with patients stimulates students' motivation for medical education and further study by connecting theory to clinical practice (Diemers et al. 2008). Draper & Louw (2007) expanded on the idea of exposure to the field in that over half of the students he interviewed mentioned family as playing a role in their decision to choose medicine, and this ranged from receiving pressure from parents or grandparents, a desire or pressure to be the first doctor in the family, or exposure to doctors within one's family that inspired or sparked a desire in them to become a doctor.

Other students were motivated by their interaction with or positive experiences of doctors and other health professionals, or by exposure to a clinical setting that triggered the desire in them to work in medicine and exposed them to the need to shape medical experiences (Draper & Louw, 2007).

Crossley, 2002 interviewed students who often spoke about how someone close to them had experienced illness, injury or death, and that this experience had motivated them to study medicine, either because of the poor quality of healthcare they observed and the feeling of wanting to be able to do something for their loved one, having increased exposure to a health setting, or because a professional they encountered during this experience had inspired them. The underlying similarity among motivating factors relate to a personal exposure to the field of medicine.

Unlike general education, where students have a wide variety of choices to do different things and create unique profiles for themselves, medical education works towards one restricted and clearly defined profession (Kusurkar, 2011). The only source for variety is in choosing a medical residency. There are specialties within the practice of medicine that require three to eight years of residency after the required four years of medical school after completing a bachelor's degree. Medical students are considered highly motivated from the outset taken considerable effort to enter medical school. These arguments underlie the rationale for studying motivation, particularly in medical students (Kusurkar, 2011). A study on small group learning found that increase in knowledge and understanding of subject matter increases students' motivation for the study and interest in the course content (Draskovic et al. 2004). Meaning that students were more motivated for learning when their feelings of competence in their learning were strong. This makes the case that students are required to prove their level of competence before even entering medical school. This promotes that students are interested and confident in the building block courses that will be covered far more extensively in medical school.

Factors Deterring the Study of Medicine

Bandura (1977) described four major reasons why high school students believed they would never be able to attend medical school. One reason was that the student would be the first person in their families to enter medical school, making it difficult to break into the medical field because their parents were not doctors and are unable to provide guidance through the detailed process. Thirty-two percent of medical students have at least one relative not including a parent or a grandparent in the medical profession (Molnar, 2006). This high-level of doctors producing doctors can make an individual outside of this exclusive group feel as though they cannot be

admitted. Second, potential students were not perceived by teachers as able to succeed as medical students (Bandura, 1977). This level of discouragement can deter students from already perceived difficult-to-enter professions. Similarly, the third reason given by students is that they had been given no support at school and told he or she would not make the grades, making it no surprise that the final reason provided by potential students was lack of self-confidence (Bandura, 1977). Although there is a high emphasis placed on the need for exceptional grades for potential medical students and as medical students, a systematic review and partial meta-analysis (Ferguson et al. 2002) reported that, while previous academic performance accounted for 23% of the variance in undergraduate performance, other non-academic criteria such as gender, ethnicity, and elements of personality, also impacted subsequent academic performance in school. Yet, even students who are encouraged by teachers still face obstacles. Lack of facilities creates a challenge because without essential educational tools, such as lab materials, educators cannot ensure that the training and infrastructure are available to provide proper support to encourage and facilitate student aspirations (Tsimtsiou et al. 2012). These factors are largely out of the students control yet create a substantial barrier for students interested in entering the medical field.

Additional studies have investigated the effect on academic performance of age, institutional effects (Arulampalam et al. 2007), having a previous degree (Craig et al. 2004), the student's natielanguage and geographic origin, physical, emotional and mental health (Hojat et al. 2002; Austin et al. 2007), and social and economic factors (Cooter et al. 2004). Exploring the topics of first-generation medical students, discouragement received from educators, lack of confidence and need for proper educational materials and equipment provide contributing factors as to why there is a lack of medical practitioners in the United States.

Need for Diversity

Americans face a critical shortage of doctors, with an expectation of 91,000 doctors needed by 2020 (Rx for Doctor Shortage, 2013). This shortage stems predominantly from the aging baby boomers coupled with an influx of 30 million Americans into the healthcare system under the Affordable Care Act. Clearly there is an unprecedented need for medical services. In an attempt to find a solution to fill the medical services gap, more than 200 legislative bills were circulated in 2013 (Health Services and Service Administration, 2014). Proposed solutions ranged in anything from allowing physicians assistants and advanced nurse practitioners to examine patients, order tests, diagnose and treat illnesses, as well as prescribe and administer drugs, all practices that are currently restricted for anyone aside from physicians. States such as New Mexico, Louisiana, and Mississippi already face a 49% to 62% physician shortage (Health and Human Services Agency, 2011).

There is good news, however. More than 45,000 students (45,266) applied to attend medical school in 2012, an increase of 3.1 percent. First-time applicants, considered to be a barometer of interest in medicine, set another record, increasing by 3.4 percent in 2012, for a total of 33,772 applicants (Ward & Bergen, 2012). First-time enrollment at the nation's medical schools grew 1.5 percent to 19,517 students, an all-time high (Ward & Bergen, 2012). Unfortunately, there is still much to be desired on the diversity front. In 2005, 46 Native Pacific Islanders, 191 American Indians and Alaskan Natives, 263 Non-US permanent resident, 1,240 African Americans, 1,272 Hispanic, and 3756 Asian were first-time enrollees in medical school compared to 11,710 Whites. Numbers remained relatively stagnant in 2012 considering the overall enrollment increase, yielding 52 Native Pacific Islanders, 184 American Indians and Alaskan Natives, 266 Non-US permanent resident, 1,416 African Americans, 1,731 Hispanic,

4572 Asian and 12,773 White first-time enrollees (Association of American Medical Colleges, 2014).

There is widespread agreement in medical education that a diverse student body and faculty enhance the educational experience for medical students. Numerous expert opinions and empiric studies suggest that diversity strengthens the learning environment, improves learning outcomes and helps prepare students to care for an increasingly diverse population (Dhaliwal, 2013). The need for diversity is so immense that it is British Medical Association (BMA) adopted a policy that the socio-economic background of prospective doctors should reflect more closely the diversity of the population (McHarg, 2007). However, the field is plagued by the idea that medical school is a privilege afforded to individuals of certain socioeconomic background, races, or genders.

In an effort to learn more about the demographics of the common medical school enrollee, Molnar (2006) examined the family history of medical students. In 503 surveys, Molnar found 68% had at least one parent with a university degree. Of this, 14.5% of the students had fathers with a medical degree, 10.8% had mothers with a medical degree, and 6.6% had at least one grandparent practicing medicine. In addition, 32.4% had at least one relative other than a parent or a grandparent in the medical profession. These statistics are not very inviting to first-generation college students, let alone first-generation medical students.

Dhaliwal (2013) also surveyed current medical students in regard to attitudes or behaviors exhibited to certain groups of students in the program. Many survey participants reported they have witnessed other students or residents make disparaging remarks or exhibit offensive behaviors toward minority groups, most often targeting persons with strong religious beliefs (43%), low socioeconomic status (35%), non-English speakers (34%), women (30%),

racial or ethnic minorities (28%) and gay, lesbian, bisexual or transgendered individuals (25%). These individuals' attitudes toward their peers could leave one to infer the same attitudes are held toward patients of these same minority groups, resulting in mistreatments and further emphasizing the need for diversity in medical schools and practicing physicians.

Across the U.S., primary-care doctors are being coached on how to deal better with patients from different ethnic backgrounds. Much of this training is being promoted by health-maintenance organizations and malpractice insurers. As they see it, bridging cultural gaps isn't just a nice idea -- it may also be a way to boost membership, save money and avoid costly medical disasters (Anders, 1997). However, ethnic-diversity training in medicine still has significant room for improvement. Some generalizations can be so sweeping as to seem almost racist (Dhaliwal, 2013). For example, one West Coast program tells doctors that Asian patients do not like blood tests because they feel their life energies will be drained. At other times, consultants alienate their physician audiences by using murky phrases such as "help-seeking behavior" or "deficits in cultural knowledge" (Anders, 1997).

Literature Review Summary

Medical schools are often viewed as an exclusive club that can only be accessed through a bloodline invite of relatives who have successfully completed their academic career and have entered the field as medical practitioners. Students, as early as high school, are discouraged from entering the field from educators who are under the impression the student does not have the stellar grades needed for acceptance. This, in addition to lack of family support, alienates a large

group of students from entering the field. These “outsiders” do not fit the stereotypical profile of the typical medical school enrollee.

Even if outsiders break the mold and enter the field, they face scrutiny. Current medical students reported they have witnessed other students or residents make disparaging remarks or exhibit offensive behaviors toward minority groups, most often targeting persons with strong religious beliefs (43%), low socioeconomic status (35%), non-English speakers (34%), women (30%), racial or ethnic minorities (28%) (Dhaliwal, 2013). Of the most common remarks made about minority groups is that it is easier for minorities to enter medical school and that female students are wasting time because “they won’t work full-time anyway” (Dhaliwal, 2013).

This lack of progress is daunting with the nation facing a shortage of 90,000 doctors over the next decade. Numbers remained stagnant between 2005 and 2012 concerning first-time enrollees in medical school. However, progress is being made by committees who review medical school applicants. This is evident by the previously mentioned policy adoption by The British Medical Association that states the socio-economic background of prospective doctors should reflect the diversity of the general population.

Computer-mediated communication allows potential medical students to have instant access to a plethora of information. Conducting research through technological devices allows for the researcher to inquire about very basic information without risk of being condescended upon by an individual providing face-to-face council. This format of communication also gives the participant time to revisit and reflect on the information. CMC moreover allows for potential medical students to be in control of the amount of interaction they engage in. In a low level of interaction, students can consult a website to receive basic information. To increase the amount of interaction the student can visit the Frequently Asked Questions section that mimics

interaction with an expert or take part in richer communication by sending an email to the expert to directly receive more information. Finally, students can engage in very high levels of rich interaction by video chatting with a professional. Computer-mediated communication conquers geographical challenges and gives inquirers access to experts all over the world.

This literature review lays the foundation for the following research questions.

The area of focus in this study is the content presented by websites targeting potential medical students. These websites are not limited to major organizational websites, it also includes YouTube videos and newspaper articles because these sites were determined as most relevant and accurate by the complex Google analytic software. These messages include what is required to enter medical school academically, course requirements, messages Internet users receive about their intelligence, how challenging the process of application is and how rewarding the field is perceived to be. Research questions were developed based on the literature review as well as from my own personal experience.

Research Questions

1. What are consulted websites communicating regarding the path that students must take in order to attend medical school?
2. What are consulted websites communicating regarding certain personality traits or specific motivating factors that students should possess in order to attend medical school?
3. What are consulted websites communicating about economic background, minority status, and gender?

CHAPTER 3

METHODS

In this chapter, I detail the research methods used to answer the questions posed in the previous chapter of this study. For the purposes of this study, I focused on identifying the messages produced by websites dedicated to guiding potential medical students. Qualitative research methods, particularly phenomenology and hermeneutics, were used to compare the themes found in the literature review with those found on the ten sample websites. Qualitative research methods are extremely advantageous in this study to gain insight; explore the depth, richness, and complexity inherent in messages portrayed to potential medical students (Morse, 2010). In a topic that has been relatively unexamined, it is better to begin with qualitative methods to obtain information and understanding to build a basis to appropriately guide further study and understanding (Bowling, 2002). In the following areas, I discuss how the sample websites were selected and how qualitative methodology was implemented in this study. For purposes of this research, I examined websites that were most accessible to the average Internet user, excluding those that required a certain organizational affiliation or payment required to view.

Description of Sample

For this study I analyzed ten websites dedicated specifically to providing information to potential medical students. To locate the most used and accurate search engine I consulted the resource, Search Engine Watch. This online resource is a digital marketing mogul and winner of the Digital Publisher of the Year Award in 2010 and 2013. I cross referenced the top three search engines provided by this Search Engine Watch with five similar digital media sites and Internet Research Organizations: TheSearchEngineList.com, SocialMediaToday.com, WebProNews.com, PewInternet.org, and Mashable.com. The most utilized search engines in 2014 are Google (<http://www.google.com>), followed by Bing (<http://www.bing.com>) and Yahoo (<http://www.yahoo.com>).

I choose to analyze 10 websites because going beyond 10 sites would go to the second page of the search results. Seventy-five percent of users never scroll past the first page of search results (Search Engine Journal, 2012). The vast majority of Internet users will browse the first page of search results and if they do not find the information sought, the search terms are reworded. Then, the first page of results is observed based on the new search terms.

I located my ten websites by using the search term “How to become a doctor.” Search terms are specific words or phrases that best describe the major concepts of the topic. These terms may also include particular keywords that describe the type of information you identified as being needed during the initial inquiry stage (Gresham, 1998).

I chose this search phrase because a person may not have enough knowledge of the subject to formulate a specific question. This search phrase also cues sites with general information that targets a very specific population of potential medical students. Further, a

general question suggests that the searcher has limited knowledge on the subject and is very impressionable by the information discovered.

Through searches conducted on the top-ranked search engine Google, I discovered the following ten sites. To ensure these sites are most accessible to the general public and indeed the first sites that potential medical students would encounter, I used the same search term “How to become a Doctor” in the second (Bing) and third (Yahoo) ranked search engines. From my searches I discovered the following ten sites as ranked in highest quality and relevance automatically, generated automatically by Google.

I did not eliminate wikis and news articles because my interest is in what potential medical student will first encounter when consider entering the field of medicine. To overlook the organic search results to review sites that are traditionally viewed as more credible deters from the purpose of the study. Content that was excluded include advertisements, included but not limited to banners, story imitation sidebars and search engine placement. I eliminated all ad related results to ensure the most organic search results. I eliminated ads because they are paid placements and therefore do not fit within the scope of examining organic search results. Also, ads are personalized for the seekers linked accounts and search history. Also,70-80% of users ignore the paid ads (Search Engine Journal, 2012). The following are the 10 websites I used in my sample. Analysis of the selected websites occurred February 3 through March 24, 2014.

- Wiki How

<http://www.wikihow.com/Become-a-Doctor>

- About Health

<http://surgery.about.com/od/questionsanswers/qt/BecomeDoctor.htm>

- How Stuff Works

<http://people.howstuffworks.com/becoming-a-doctor.htm>

- American Medical Association

<http://www.ama-assn.org/ama/pub/education-careers/becoming-physician.page>

- American Medical College

<https://www.aamc.org/download/68806/data/road-doctor.pdf>

- CBS News

<http://www.cbsnews.com/news/1-million-mistake-becoming-a-doctor/>

- Forbes

http://www.forbes.com/2008/05/05/physicians-training-prospects-lead-careers-cx_tw_0505doctors.html

- University of Illinois at Chicago

<http://uic.edu/depts/mcam/hcoe/documents/THEROADTOBECOMINGADOCTOR.pdf>

- Princeton Review

<http://www.princetonreview.com/medical/osteopathic-medicine.aspx>

- Thee Minute Summaries YouTube Channel

<http://www.youtube.com/watch?v=B2YCMkTLLNk>

Qualitative Methodologies

The strength of qualitative research is its ability to provide complex textual descriptions of how people experience phenomenon. It provides information about the "human" side of an issue; that is, the often contradictory behaviors, beliefs, opinions, emotions and relationships of individuals (Bernard, 1995). The use of rigorous qualitative research methods has been on the

rise in health services and health policy research. The growth of these methods, particularly in the medical field, exemplifies growth consistent with developments in the social and policy sciences at large and reflecting the need for a more in-depth understanding of naturalistic setting and the importance of understanding the context and complexity of implementing social change (Safaer, 2002). This is most greatly achieved through the use of qualitative methodologies, which seek to examine experience and shared meaning. Throughout the past 20 years we have observed a drastic development of theoretical advancement. An area of growth that is especially notable is the conceptual revisions of epistemological and methodological approaches within constructivist-qualitative areas of the social sciences, particularly within the concept of phenomenology (Noy, 2008).

Phenomenology aims to find the core or construction of an experience by explaining how multiple meanings are formed out of simple units of inner experience. The method involves provisionally putting aside or “bracketing” personal attitudes and beliefs regarding the phenomenon, thereby heightening consciousness and allowing the researcher to intuit or see the phenomenon from the perspective of those who have experienced it (Pringle, 2011). All collected data is laid out and treated as equal, clustered into themes, examined from multiple perspectives, and descriptions of the phenomena (how and what) are constructed (Pringle, 2011). In this study I laid out the data gathered from the ten websites. This information was blended with major concepts from my personal narrative in addition the literature review. Data included all of the major messages that were communicated within the website, personal narrative and literature review. Then, this information was analyzed divided into themes.

Hermeneutic study suggests that pre-judgment or prior knowledge plays an important part in our understanding of information (Myers, 2004). Our attempt to understand a text always

involves some prior knowledge or expectation of what the text is about. Hermeneutics can be treated as both an underlying philosophy and a specific mode of analysis (Bleicher, 1980). As a philosophical approach to human understanding, it provides the philosophical grounding for interpretivism. As a mode of analysis, it suggests a way of understanding textual data (Myers, 2004).

Hermeneutics is primarily concerned with the meaning of a text or text-analogue (Myer, 2004). Today, within the sphere of qualitative methods, the word hermeneutics seems to be interchangeable with the term phenomenology (Clandinin & Connelly, 2000). They are linked closely, but they in fact do have different implications to qualitative researchers. Both phenomenology and hermeneutics are modes of analysis used by qualitative researchers to interpret data. The two approaches share the fundamental idea that interpretation of a text, or of an artifact, should be approached from a multi-perspective vantage point.

Husserl, a phenomenological philosopher believed the object under study and the subject studying that object could be separated (Clandinin & Connelly, 2000). He believed that in order to understand what the subject knows about the object, that what is known can and should be bracketed. Heidegger, however, believed that the object and subject are not separable. He believed that persons are thrown into the world and that the context of that world will shape their perspectives. Heideggeran hermeneutics involved the study of shared stated of being, articulated through dialogue (texts, and parts of texts), that common beliefs and practices can be revealed (Arnett, 2007). To be human is to be an interpreter of experiences. My personal narrative, located in Chapter 1, serves as the context which to comparative information to material provided on websites targeting potential medical students. The concept of interweaving personal experience and linguistic meaning was discussed extensively by Ricoeur (1991), who claimed

that when used together, experience and meaning allow one to interpret his or her world for the audience. In using this combined methodology, the audience becomes a part of the experience as lived by the writer, thereby creating for the audience an understanding and appreciation of that world (Hoogland, 2003; Ricoeur, 1991). In collaboration, phenomenology and hermeneutics are methods to facilitate a deeper understanding by researching lived experience and analyzing the textual representations of those experiences (Anderson, 2004).

Interpretive Analysis

The qualitative analysis focused on the textual in context of my personal narrative in Chapter One, a thorough review of the literature and the text of 10 websites targeting potential medical school students. My personal narrative was needed to articulate my story and experiences of an individual researching the process of entering medical school or becoming a physician. After determining the most salient themes of my narrative, I compared those themes to those found in the literature review and also the messages being portrayed on the 10 websites. Themes are often abstract constructs that link not only expressions found in texts but also expressions found in images, sounds, and objects (Ryan & Bernard, 2003). The techniques I used to determine themes are based on: (1) an analysis of words (word repetitions, key-indigenous terms, and key-words-in contexts); (2) a careful reading of larger blocks of texts (compare and contrast, social science queries, and searching for missing information); (3) an intentional analysis of linguistic features (metaphors, transitions, connectors); and (4) the physical manipulation of texts (unmarked texts, pawing, and cut and sort procedures) (Ryan & Bernard, 2003).

While analyzing websites targeting potential medical students, I noted recurring themes in the literature. Although I expected certain themes to emerge based on my own personal experience and the literature, I was cautious to recognize new themes. I used constructs from my personal narrative and the literature review merely as a guide for analyzing the sample.

Methods Summary

Utilizing multiple research methods, phenomenology and hermeneutics, creates a methodological triangulation to check and establish validity. Also, the combination of these two methods enables one to identify themes while honoring the subjective nature of qualitative research by highlighting personal experience, allowing for the identification of deeper meaning in the data. This study delves into how these messages may impact the student's decision on whether or not to enter medical school and conversely, the practice of professional medicine. These methods enable the reader to gain a deeper understanding of the impact of the messages being portrayed. Additionally, this dual methodology provides the researcher and readers with tools to ponder the reflexive nature of analysis. In Chapter 5, I detail the findings of this analysis as well as discussion of the findings of the study. This section is organized by dominant themes that are presented on the website targeting potential medical students. Finally, Chapter 6 describes a summary of major points in addition to a discussion of the limitations of the study and directions for further research.

CHAPTER FOUR

FINDINGS AND DISCUSSION

This chapter examines the findings of a qualitative analysis of content found on the ten most accessible websites targeting potential medical students. The findings are presented by theme, in order of most significant finding followed by secondary findings. The findings and discussion are integrated to evoke a highly focused presentation of the most salient findings. This strategy eliminates repetition of findings and provides a more conversational read. Themes include; A Word of Warning, The Road to Medical School, Characteristics of a Physician, Continued Education, and You're a Doctor, So Now What?

“Many people think that becoming a doctor is difficult. Others have some sense that becoming a physician takes many years and is expensive. Most people realize that being a physician is difficult yet rewarding. All these people are correct. Becoming a physician is a long, arduous, expensive process that can only be accomplished with great dedication” (How Becoming a Doctor Works, 2011).

In this work by Bianco, she encompasses a variety of ideas that are found in my own personal narrative, literature, and on examined sites. Bianco sheds light on a divide that exists between the medical community and laypeople. In this study, the medical community is defined as individuals who work within a medical organization such as a hospital, clinic or treatment facility. Laypeople are individuals without professional or specialized knowledge in the practice of medicine. The tonal difference between medical and non-medical authors is prevalent in the excerpts presented in the following themes. The different lenses of focus between medical and

non-medical authors are also clear in the themes, especially when messaging the same core information.

A Word of Warning

Entering medical school, especially as a career change, is a decade long commitment but comes with the rewards of enriching patient's quality of life each and every day (personal narrative, Chapter 1, para. 15).

Across all the examined sources (websites, my personal narrative, and literature), that becoming a physician takes an extensive amount of time and is challenging. Sites targeting potential medical students that were authored by members of the medical community were especially detailed and explicit in making sure students realize what they are committing to if they chose to begin medical school. Medical authors also elaborate on life after graduation by expressing the challenges of practicing medicine. The degree of emphasis placed on the difficulty is where the prominence lies. Publications created by medical professionals express how the challenge is manageable while authors that are outside of the field dwell on the adversity.

The University of Illinois at Chicago's (2014) *Steps to Becoming a Physician* document comes at the target audience with terminology that evokes intense emotion and calamity; "BEING A DOCTOR MEANS SERVICE TO MANKIND and is...HARD WORK!!!!" After reaching out to the Hispanic Center of Excellence who is provided as the contact for the publication, they confirmed that the document was produced from the collaboration of multiple students outside of the field of medicine. *How to become a Doctor*(n.d.) composed by a staff writer with no medical background also uses points that emphasize struggle "you'll work long

hours, deal with difficult people, and your life during this process will revolve around your work.”

However, a practicing physician presents the same core information in a tone that is conversational and meaningful, “It takes many years of preparation, the discipline, the awesome responsibility, the worry about malpractice and the long hours can take their toll. Medicine is a unique field and it demands a unique person to serve others” (How Becoming a Doctor Works, 2011). This conversational tone was consistent across pieces that were written by practicing medical professionals. The format of publication did not influence the tone of the information for medical authors, whether it was a wiki, newspaper article, or organizational publication. The calm tone remained constant in the pieces written by medical authors who presented the information using terminology such as “manageable,” “achievable,” and “rewarding.” Heisler (2011) echoes this point in his work *How to Become a Doctor* stating that “becoming a doctor or a surgeon is an honorable goal, but it is a long and challenging process that is achievable with the right mindset and work ethic.”

Medical practitioners have had years of experience. First-hand knowledge drives their writing. Eagerness to encourage those considering the field is fueled by a passion of working within medical organizations. Although the journey may be challenging and time consuming, they have lived it and are able to share direct knowledge of their journey. Practitioners are providing information to those interested in the medical field from a credible viewpoint. It is telling that those who have not experienced the process use terminology that is frantic and warning. The stark contrast in commentary from the two groups alludes to the thought of medical school is more intimidating than the admitting and educational actual process.

Road to Medical School

Making the Choice

I suddenly felt intimidated because I didn't have a pre-med or hard science undergraduate degree; I didn't come from an affluent family and was unsure how I would support myself even if I made it to medical school (personal narrative, Chapter 1, para. 11).

The divide medical communities and laypeople continues when discussing the road to becoming a physician. Medical authors encourage those who did not take the traditional path of obtaining a pre-med undergraduate degree to still pursue a medical career. The Association of American Medical Colleges (2008) clearly states that “there is no single road to becoming a doctor, but most medical career paths share key characteristics.” Medical professional Heisler (2011) in *How to Become a Doctor* also shares this message and presents the thought in a reassuring tone “do not be concerned if you did not know in high school that you wanted to become a doctor, or even in college, there is a trend of medical students and residents being older than the traditional 23 year old first year medical student.” Bianco (2011) in *How Becoming a Doctor Works* further emphasizes the point by reiterating that there no required majors for acceptance into medical school. While the most common major is biology, medical schools accept students from many backgrounds. Medical affiliated publications also accentuate that some medical students are starting a second or third career and have families and experience in another field. Further, one website explains that some admissions teams look favorably on older

candidates because they have had more opportunities to hone skills (The Road to becoming a Doctor, 2008).

In contrast, personal finance journalist, Kathy Kristof (2013) in her article *1 Million Dollar Mistake: Becoming a Doctor*, advises ambitious individuals and gifted science students considering becoming a doctor to “think twice.” All of the journalists from the sample make reference to most doctors being dissatisfied with the job. Kristof (2013) states that less than half of physicians would choose a career in medicine if they were able to do it all over again. Career and leadership writer for *Forbes*, Tara Weiss (2008) in her article *Reasons not to become a doctor* mentions that “for decades doctors earned hefty paychecks and had autonomy and respect; but those benefits are fading and so should desire to enter the field.” Both journalists use terminology that immediately evoke a negative tone, terms such as “think twice” and “dissatisfaction.” Weiss takes it a step further by directly stating to readers that interest in the field should fade, advising those reading that they are making a mistake by considering attending medical school.

The divide between medical and lay authors may be caused by lack of information. To those outside of the field, it is relatively unknown what steps must be taken to become a physician or any form of medical practitioner. Laypeople possess only common knowledge. One of the most well-known facts is that it takes a long period of highly focused time to complete medical school and training. Due to non-medical professionals not going through the process, they have not seen examples of people that take other paths to obtain a medical degree. Additionally, laypeople may not be passionate about the practice of medicine and have no personal interest in recruiting new members into the medical community. Those of the medical field are inherently invested in doing so.

Grades

In high school I was far from being valedictorian, in addition to undergraduate. Life came before school. I have always worked two jobs since age 14 because paying the bills took precedence over staying up late to study for a test I knew I could pass without prep. (personal narrative, Chapter 1, para. 16).

There is agreement across all of the 10 consulted websites of the core five courses required to get into medical school. The courses that are consistent across the board include one year of General Chemistry, Organic Chemistry, Biology, Physics, and Calculus. Students are encouraged to score as highly as possible in these core areas in addition to scoring highly on the Medical College Admissions Test (MCAT). The MCAT is a standardized test designed to evaluate qualification for admission to medical schools. This test allows for a comparison of all potential medical students, regardless of background, to be evaluated on the same set of standards.

Medical practitioners take the time to explain the purpose for the courses and the MCAT as opposed to the laypeople emphasizing the difficulty of both coursework and the MCAT. Bianco (2011) states that the sciences courses, in particular Organic Chemistry, are traditionally the "weed out" courses that eliminate students who will not make it into medical school. The MCAT is then described by those in the profession as a means for students to shine among their peers. Laypeople, in contrast, emphasize the need for perfect grades, describing those that are considering medical school to consider themselves a "genius" or forget it (*Reasons not to become a Doctor*, 2008). No explanations are given for the requirements to enter medical school,

rather an emphasis on the rigor and extensive amount of time and money that is required to enter and complete medical school.

The recurring divide between the medical community and laypeople boils down to experience. Those outside of the field are left with what they are able to consume in daily life. Lay authors are journalists; they consume the media daily because journalists themselves are the media. More specifically, these particular authors have no specialty in the medical field. Their beat dictates the perspective that they portray. Therefore, Weiss of Forbes Magazine would take the angle of pursuing a career in medicine a “million dollar mistake.” This is problematic because laypeople can negatively impacting a potential pool of future doctors because of the use of terms such a “genius.” Weiss, in *Reasons not to Become a Doctor*, goes as far as dedicating an entire article to advising readers to not enter the medical field. Non-medical authors are from notable publications with high levels of credibility and large audiences. In contrast, those in the medical field are keenly aware of the physician shortage and requirements for entering and succeeding in medical school. Due to experience with the process and an acute awareness of the consequences of turning away potential medical students, medical practitioners use encouraging language and take time to explain the reasons behind strict admissions standards.

Characteristics of a Physician

Personality Traits

Feeling helpless and overwhelmed with the thought of people who need help with addiction but are often dehumanized for their lack of insurance and social status, I

turned to the Internet and began searching "How to become a Doctor?" (personal narrative, Chapter 1, para. 9).

Consistent information was presented on the need for excellent grades and educational requirements across the sample in websites composed by both medical and non-medical authors. In order to get into medical school, you will not only need excellent grades, but you will also need to demonstrate that you are a responsible, well-rounded person ("How to become a Doctor", n.d.). Medically affiliated authors were the only ones who spent discussing essential characteristics a potential medical students needs in terms of character and how it translates to being admitted to medical school and success in the field.

One area of emphasis was community service. "Through your community service record, show that you enjoy helping people" (How Becoming a Doctor Works, 2011). How to become a Doctor (n.d) recommended getting to know your community service supervisors and earn their respect because their recommendation letters will be essential for getting interview invitations from medical schools. References to grades were made in a way that did not deter potential medical students from the importance emphasized more essential characteristics.

"Being smart and doing well in the sciences are obviously important components of being a successful physician. However, do not fall into a medical career because you have done well in the sciences. Although this is a necessary requirement, you must also be able to relate well with people" (How Becoming a Doctor Works, 2011).

Three cornerstones of a successful career in medicine were noted throughout works compiled by medical afflictions. These cornerstones are a love for learning in general, a true intellectual curiosity about medicine in particular and a strong desire to help others. Wanting to help others and enjoying helping others are necessary attributes of a good physician. This is

something that cannot be taught (How Becoming a Doctor Works, 2011). Schools seek students who demonstrate a sincere interest in medicine and public service and who possess certain key characteristics (The Road to becoming a Doctor, 2008).

Medically affiliated authors also detailed a need for potential medical students to keep a level head. People's lives will depend on your commitment to the job and your ability to stay calm and make decisions under pressure ("How to become a Doctor," n.d.). The ability to analyze information and solve problems, establish relationships and communicate with patients and colleagues, display good judgment, and make sound decisions under pressure are characteristics sought in future medical students (The Road to becoming a Doctor, 2008). This thinking requires prioritizing others' needs ahead of those of medical students. This reality does not stop in the field or classroom. Students must be willing to put off starting a family or getting married until their 30s, as most doctors do not begin their careers until 29 at the absolute earliest (How Becoming a Doctor Works, 2011). This can be even later if the person enters the field after working in other professional disciplines.

It is no surprise that only medically affiliated authors shared characteristics that potential medical student needs outside of educational requirements. Those in and around the field know what it takes beyond the classroom from first-hand experience. Just because a candidate looks good on paper does not translate to direct professional success. It is interesting to note that laypeople do not make mention for the personality characteristics needed to enter medical school and be a successful medical practitioner. Although these authors do not have experience in profession, it is rare to think of a person who has not had interaction with the field as a patient. In the service industry, the saying that "the customer is always right" is commonly used. Although

patients may not be aware of the best means for their treatment, certainly laypeople are aware of how they would desire to be treated.

Need for Motivation and Commitment

Sources strongly discouraged working while in medical school because of the amount of time and energy it takes. It was so foreign to me to even contemplate the idea of not having a job and only attending school considering my work history. I need to be able to support myself (personal narrative, Chapter 1, para. 14).

There is an intense need for motivation and commitment in order to complete the task of getting into medical school, let alone graduate and becoming a practicing physician. This is an area where medical and non-medical professionals concur. Success on entering medical school depends more on a commitment to your goals and interests than on doing exactly what every other applicant does. When you interview in a medical school, the admissions committee wants to see that you are committed to achieving your goals, regardless of what they are (“How to become a Doctor”, n.d.). Potential medical students must have a clear set of goals and plan of execution to make them happen. In order to do this, any potential medical student must have mastered the skill of time management.

Once a student enters medical school, they must be willing to sacrifice activities such as video games and TV to properly manage time (How Becoming a Doctor Works, 2011). A medical students’ journey is long. The education of physicians in the United States is lengthy and involves undergraduate education, medical school and graduate medical education (Requirement for becoming a Physician, 2014). While most people realize that it takes a long time to become a doctor, relatively few fully understand the process of medical education and training (The Road to becoming a Doctor, 2008). It takes a great deal of diligence and motivation to finish the

training as it takes many years of study to practice medicine independently (How to Become a Doctor, 2011).

The agreement between the medical community and laypeople makes perfect sense. The analysis on both sides of the fence stem from the requirements of entering and graduating medical school. Since there was agreement on the foundation of the concept of needing motivation and commitment, it is logical both groups would arrive at a similar conclusion. There is a trend that areas that are less ambiguous to those outside of the medical field allow for the medical community and laypeople to arrive to the same conclusions and recommendation. For example, educational requirements and the subsequent need for motivation and commitment.

Do Not Make It About the Money

In my limited exposure to the field, all I knew is that to become a doctor, you need to go to school for a long time and the education came with a price tag of more money than my parents had seen in my lifetime (personal narrative, Chapter 1, para. 11).

It is no secret that physicians make a hefty salary. The medically affiliated authors and laypeople take two different approaches when addressing money to potential medical students. Medical authors warn to not allow money to be the driving factor to enter the occupation while non-medical authors emphasize the debt students will be accumulating.

“One word about money, please don't let this be a driving factor in your decision, for the sake of your patients and yourself, because it will not sustain you. There are other careers in which you can make more money without the responsibility and the effort it takes to be a physician” (How Becoming a Doctor Works, 2011).

The cost of becoming a doctor has soared, with higher education expenses leaving the average newly minted physician with \$166,750 in medical school debt. At the same time, average physician salaries are declining. Nearly one-third of doctors, 28%, saw a cut in pay last year (1 Million Dollar Mistake: Becoming a doctor, 2013).

It takes between 11 and 14 years of higher education to become a physician. That means the typical doctor does not earn a full-time salary until 10 years after the typical college graduate starts making money. Kristof (2013) in *1 Million Dollar Mistake: Becoming a Doctor* explains that lost decade of work costs a half-million dollars, if you assume this individual could have earned just \$50,000 annually, and the typical medical school candidate is smart and successful enough to earn considerably more. Add in the time and cost it takes to pay off medical school

debt and a physician may well “consider pursuing medicine a \$1 million mistake.” For potential physicians there is a future of looming medical-school debt, which is higher than ever. Students who graduate from a public medical school have a median debt of \$100,000; private-school students graduate with a median debt of \$135,000, according to a study by the Association of American Medical Colleges (2003). Compare those figures with data from 1984, when median debt for public-school graduates was \$22,000 and private-school students were \$27,000. Yet, potential compensation is high also for medical practitioners. These websites consulted suggested that regardless of specialization or geographic regardless, physicians make six-figure salaries. This is also corroborated by information provided by the Bureau of Labor Statistics.

Medical school has extensive measures in place to ensure that students are in the right place. Starting in undergrad, potential medical school students are weeded out with challenging courses. Then, at the very least students are explicitly aware that they will spend an absolute minimum of seven years of training, after the completion of an undergraduate degree, to become a physician. It only makes sense then that 95% of the students entering medical schools do end up earning their M.D. degree (How Becoming a Doctor Works, 2011). In regard to debt, if a student is truly called to the practice of medicine then they realize that debt is an investment in their future to pursue a passion. Additionally, there are multiple avenues to have school completely subsidized, such as joining the military.

Continued Education

Yet at the same time, I wondered how incredible it would be to be able to just be a student of an occupation that saves lives (personal narrative, Chapter 1, para. 15).

Potential medical students must be made aware of the level of continued education that is involved as they complete their degree. Similar to the basic education requirements, there is accord between the medical and non-medical communities when describing continued education. The first step in this continued education is residency. Whereas medical school teaches students a broad range of medical knowledge, basic clinical skills, and limited experience practicing medicine, medical residency gives in-depth training within a specific branch of medicine.

Newly graduated doctors enter into a residency program that is three to seven years or more of professional training under the supervision of senior physician educators. The length of residency training varies depending on the medical specialty chosen (Requirement for becoming a Physician, 2014). Subspecialty training may extend the period to as long as 11 years following the award of the medical degree. This training can be very demanding, but it is a period that reveals medicine's challenges and rewards (The Road to becoming a Doctor, 2008).

One of the demands of residency includes the task of being on call. Being on call while in residency means that you stay in the hospital overnight and care for the patients on your team and care for new admits. This means working up to 30-36 hours with little or no sleep (How Becoming a Doctor Works, 2011). School and training go on "seemingly forever; once graduation arrives, doctors work long hours and are faced with life-and-death decisions daily" (Reasons Not to Become Doctor, 2008). Many physicians reflect on their residencies as years filled with hard work and invaluable lessons.

Learning does not end when physicians complete their residency or fellowship training. Doctors continue to receive credits for continuing medical education (CME), and some states require a certain number of CME credits per year to ensure a knowledge and skills remain current. Continuing medical education requirements vary by state, by professional organizations, and by hospital medical staff organizations (Requirement for becoming a Physician, 2014).

The majority of physicians also choose to become board certified, which is an optional, voluntary process. Certification ensures that the doctor has been tested to assess his or her knowledge, skills, and experience in a specialty. These criteria for certification are put into place to determine whether or not the medical professional is deemed qualified to provide quality patient care. This shows that those who enter medical school have a high interest in education. This just adds to the already evident information as exemplified through medical students dedicating themselves to another four years of formal education after the completion of their undergraduate education.

You're a Doctor, Now What?

I realize that if I had stopped at just reading articles by popular news outlets, I more than likely would not take the next step in attempting to pursue medical school (personal narrative, Chapter 1, para. 16).

The discussion on life as a doctor continues to have lines clearly drawn between the medical community and layperson authors. Medical affiliations touch on job satisfaction, while laypeople dominate this conversation. This group extensively discusses job dissatisfaction, the impacts of medical care reform, and malpractice lawsuits. Increasing costs of medical malpractice coverage, higher practice costs, lower insurance reimbursement rates and insurance-company restrictions resulting in less autonomy (Reasons not to Become a Doctor, 2008) are problems faced by both current and incoming physicians. Currently, one-third of the country is insured by Medicare and over the next nine years, the government program plans to cut payments to physicians by about 40%, while practice costs are projected to increase 20%, according to the American Medical Association. The first of those cuts took place in July 2008, when the reimbursement rate to doctors dropped by 10.6% and will continue to fall. In addition, malpractice is a concern. It takes approximately 4.5 years to adjudicate a lawsuit and the average cost of defense was \$94,284 in 2003 (The Road to becoming a Doctor, 2008).

The least satisfied physicians are those who go into internal medicine. On average, these doctors see two patients every hour while spending 23 percent of their time on paperwork. They work an average of 54 hours per week, earn about \$185,000 annually, and nearly one-fifth have seen a decrease in pay. Just 19 percent would choose the same specialty, and only one-third would choose a medical career if they had to do it over (1 Million Dollar Mistake: Becoming a

Doctor, 2013). Across all specialties, physicians see, on average, 13 patients per day, work 52 hours per week and earn an average of \$270,000. However, family and emergency doctors see nearly 75 percent more patients than anesthesiologists (1 Million Dollar Mistake: Becoming a Doctor, 2013), simply due to the nature of their work.

Laypeople tend to focus on the quantifying experience when discussing the medical profession. Numbers are a common language that all individuals can understand. This quantitative approach also deters from the qualitative experience of being in the medical profession. It makes sense that those outside of the practice would not be able to describe the professional qualitatively because they have not experienced it. However, surveys are readily available to present information in a common form that lay audiences can understand.

Findings Summary

During the research process, findings showed a difference in the way medical authors and non-medical authors explained the requirements for admission to medical school, the road to applying to medical school, financial implications of entering the medical field, motivating factors for the study of medicine, and personality traits of potential medical students. The differences were most prominent when addressing topics that were not the concrete presentation of a defined path which addressed RQ1, “What are consulted websites communicating regarding the path that students must take in order to attend medical school?” There was agreement across all of the 10 consulted websites of the core five courses required to get into medical school and subsequently the need for motivation and commitment to reach this goal. This is where the agreement stops. The divide is most extreme when the role of advising is introduced. Addressing RQ2, “What are consulted websites communicating regarding certain personality traits or specific motivating factors that students should possess in order to attend medical school?” medical and non-medical authors agreed that potential medical students must be highly motivated, committed, and have a desire for continued education in order to be successful. Medical authors shared personality traits such as being level-headed, compassionate and not being motivated by money in order to enjoy a career in medicine. Money was addressed extensively on both sides. Medical authors were adamant on advising potential medical student to not be motivated by money while non-medical authors concentrated on debt.

Addressing RQ3, “What are consulted websites communicating about economic background, minority status, and gender?” medical authors and non-medical authors both discouraged attending medical school while working. This cuts off a segment of potential medical students that must support themselves through medical school. Researchers would need to

consult other search terms in order to find resources that provide financial support to medical students such as grants, military programs and loans. For students contemplating medical school who did not take the traditional path of obtaining a pre-med undergraduate degree, the medical community was still encouraged them to pursue a medical career while laypeople wrote off the possibility.

Laypeople gave potential students the impression that they must be “geniuses” to enter medical school and warned intelligent individuals to consider another field unless they want to be swamped with debt, put their personal life on hold and be dissatisfied with their career. The degree of emphasis placed on the difficulty and quality of life is where the prominence lies. Publications created by medical professionals express how the challenge is manageable while authors that are outside of the field dwell in the adversity. Neither medical nor non-medical authors addressed obstacles to medical education for minorities or women when examining websites. However, this topic was heavily covered in the academic literature regarding potential medical students.

There are two essential areas where one side of the divide led the discussion. Medical practitioners dominated the conversation when discussing the personality traits required for potential medical students while lay people were the forefront of discussing what students can expect post-graduation such as job dissatisfaction, impacts of medical care reform and lawsuits.

Discussion Summary

The divide between medical and lay authors may be associated with the mystery of the craft. To those outside of the field, it is relatively unknown what steps must be taken to enter

medical school. Steps beyond that are even more mysterious because such a small slice of the population takes on the process and even fewer feel compelled to share the experience.

Additionally, laypeople are not passionate about the practice of medicine and have no personal interest in recruiting new members into the medical community. Those of the medical field are inherently vested to do so.

The mystery of the craft may also be responsible for laypeople tending to focus on the numbers when discussing the medical profession. Laypeople possess only common knowledge and what is readily available to the public. Figures that describe items such as debt and salary are easily accessible through associations such as the AAMC. Numbers are a common denominator that individuals across all areas can disseminate. The figures can help put points into perspective. Laypersons gravitation toward the dissection of these numbers makes sense given the business background of the majority of the laypeople in this sample.

The areas of agreement are founded in common and well-established knowledge of medical school such as educational requirements. These facts are largely black and white due widely uniform requirements established by medical schools. The other area of agreement, need for motivation and commitment among medical students, is also founded on educational requirements causing a logical progression to consensus.

CHAPTER 5: CONCLUSION

In the concluding chapter I recap findings of the study again in the summary section. I then connect these findings with the literature review. Finally, I provide a discussion of the limitations of this study and make suggestions for further research.

Summary

The medical field is an experience all humans share either as a patient or as a practitioner. As medical care reform continues to lead broadcast media, curiosity surrounding the field continues to swarm. Americans face a critical shortage of doctors, as many as 91,000 by 2020 (Hinkley, 2013). This shortage stems predominantly from the aging baby boomers coupled with an influx of 30 million Americans into the healthcare system under the Affordable Care Act. This looming crisis is one of the many reasons it is valuable to examine messages being portrayed to potential medical students.

The review of literature addresses the relationship between career decisions, particularly entering medical school, and Internet use. First, the review delves into how career decisions are made. Elaborating on individuals continued draw toward historically gender specific fields in addition to how gender plays a role in the career decision-making process. Next, the Internet's influence on profession selection and integration in modern society's daily lives is examined. Finally, motivations for entering medical school are inspected. Motivations reveal a link between early exposure to the field of medicine in relation to the decision to enter medical school in

addition to barriers of entering the field and a desperate need for diversity in medical schools to fulfill the shortage of doctors in the professional field.

Potential medical students have an immense amount of resources available when conducting online research in regard to their future career decisions. For this study I analyzed 10 websites devoted to giving information to people considering enrolling in medical school. In order to ensure that the search engine used would yield the most salient results, I referred to the recipient of the Digital Publisher of the Year Award in 2010 and 2013, Search Engine Watch. I compared the top three search engine websites recommended by Search Engine Watch and compared the results with other top-rated Digital Media specialists and Internet Research Organizations; TheSearchEngineList.com, SocialMediaToday.com, WebProNews.com, PewInternet.org, and Mashable.com. From consulting these resources I chose to use the most used and accurate search engine, Google.

Findings showed a trend of a divide between medical community authors and laypeople authors. The divide was most prominent when discussing topics that were not the concrete presentation of a defined path. For example, there is agreement across all of the 10 consulted websites of the core five courses required to get into medical school and subsequently the need for motivation and commitment to reach this goal. This is where the agreement stops. The divide is most extreme when the role of advising is introduced.

Website publications created by medical professionals express how the challenge is manageable while authors that are outside of the field dwell in the adversity. There was an overlap in themes of findings, the literature review, and my personal narrative. The most prominent connection between these three sources of data is the need for motivation for potential medical students, educational requirements and need for diversity in the medical field. Overall, it

can be assumed that potential medical students who consumed information composed by the medical community feel more empowered to begin the journey while those who read literature developed by laypeople were likely to feel they were making a mistake.

Connections to the Literature Review

The literature describes that medical schools are often viewed as an exclusive club that can only be accessed through a bloodline invite of relatives who have successfully completed their academic career and have entered the field as medical practitioners. Students, starting as early as high school, are discouraged from entering the field from educators who are under the impression the student does not have the grades needed for acceptance or success. This discouragement is also presented by laypeople in findings that use terms such as “genius” as a requirement for students considering entering the field. In contrast, the medical community authors were very supportive of those who were considering entering medical school but took the time to explain the need for rigorous requirements and discussed the manageable difficulty of the education process.

The literature references a large group of students entering the field that lack family support. Emphasize that these “outsiders” do not fit the stereotypical profile of having relatives in the field or being of an affluent background. Even if outsiders break the mold and enter the field, they face scrutiny. Current medical students reported they have witnessed other students or residents make disparaging remarks or exhibit offensive behaviors toward minority groups, most often targeting persons with strong religious beliefs (43%), low socioeconomic status (35%), non-English speakers (34%), women (30%), racial or ethnic minorities (28%) (Dhaliwal, 2013). One of the most common remarks toward minority groups was “how much easier is for them to

get into medical school” and how it was a waste for the amount of women who are admitted because “they won’t work full-time anyway” (Dhaliwal, 2013). The findings address a need for diversity stating those from different educational backgrounds are looked favorably on by admissions committees. This is reflective of the literatures mention of The British Medical Association adopting a policy that the socio-economic background of prospective doctors should be broadened to reflect more closely the diversity of the population (McHarg, 2007). Despite apparent progress in the mindset of medical school policy, numbers remained stagnant between 2005 and 2012 concerning first-time enrollees in medical school. This lack of progress is daunting with the nation facing a shortage of 90,000 doctors over the next decade. The lack of practitioners in the field is addressed by both the medical community and lay people.

Finally, Crossley (2002) spoke to a need for motivation and motivating factors for students entering medical school. Motivation is a topic that was extensively discussed in the findings. The literature, findings and personal narrative all come to a consensus that it is critical for medical students to be intrinsically motivated and not driven by outside factors such as money or family pressure. Students who had someone close to them experience illness, injury or death, were often motivated to study medicine. Reasons reported included the poor quality of healthcare observed, feeling the need to help a close friend/relative, increased exposure to a health setting, and encountering an inspirational health professional.

Limitations of this Study

Limitations were present in this study, as is the case with all communication studies. Limitations include studying 10 websites out of millions of search results, using one broad search

term, and only using online information. However, despite several limitations, this study provides an in-depth look at the ways in which potential medical students receive information about medical school and the medical profession. This study sheds light on the ways in which profession is discussed, both by those inside the discipline and those outside the medical community.

The study sample was limited to 10 websites when there are 415,000,000 results produced by Google when using the search term, “How to become a Doctor”. An analysis of all of these sites is exhaustive and unnecessary due to the fact that information seekers usually do not venture past the first page of search engine making the first 10 results the most likely for reaching potential medical students.

Although the Internet is a commonly used method of research, it also would have been helpful to compare the findings of the Internet search to interviews conducted with career counselors and admissions counselors for medical schools. Another way to strengthen the research would be to survey potential medical students’ interpretations and reactions to the sample to see if it is congruent with the analysis.

This study has limitations because I was only interested in examining the messages portrayed to potential medical students on websites. Very specific search terms “How to Become a Doctor” was used in order to yield general information on the subject. I did not go beyond the first ten websites from this search because a higher number would go beyond the first page which is not going to be viewed by searchers as expressed in more detail previously. Thus, despite limitations, the value of the study is noted.

Suggestions for Further Research

Despite limits of this study, the findings suggest opportunities for the further study of messages portrayed to potential medical students. One topic recommend to those that are intrigued by this topic is to further investigate the divide between medical and layperson composed information. Discover if medical community authors are presenting information to encourage potential medical students to enter the field or presentation of the full knowledge of experience reveals that the craft of medicine is less intimidating as the veil of mystery is tarnished. This can be done by interviewing medical authors and discovering their reasons for composing articles.

Additionally, with America facing an incredible doctor shortage over the next ten years, it is worth examining why potential medical students are deciding not to enter the field. It would be interesting to examine if students were more drawn to the field or discouraged after conducting their own research online. This could be examined by taking excerpts from search results and having students provide feedback. Researchers can also examine ads impact on messages portrayed by websites and interference on organic search results. The core messages can be contrasted with and without ad search results. Finally, search terms that are more demographic specific such as “How to become a Doctor if I cannot pay for medical school?” can be examined to see the number of medical vs. non-medical authors. The researcher can then evaluate if these authors follow the same trend of findings presented in this study since they are writing information to cater to a specific audience as opposed to a general audience. This study lays a foundation for beginning the discussion of barriers to the field with potential medical students.

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VITA

Kelly Lynn Oehler

Education: Public Schools, Wilmington, Ohio
University of Texas at Arlington, Arlington, Texas:
Public Relations, B.A., 2012
Minor: English

Professional

Experience: Multi-platform Journalist/Photographer, WTHI-TV; Terre Haute, IN, 2013-Current
Graduate Assistant, Indiana State University; July 2012-May 2014
Creative Service Intern, Cincinnati Reds; February-September 2013
Strategic Initiatives Assistant, Tarrant County College; 2011-2012
Public Relations Assistant, FC Dallas; January- July 2012
Media Relations Intern/Event Staff, Texas Motor Speedway; 2011-2012
CBS Sports Network Campus Representative, Arlington, Texas; 2011-2012
Marketing/Promotions Coordinator, Emmis Communications; 2010-2011

Professional

Affiliations: Member, Public Relations Society of America
Member, Women in Communication
Member, Terre Haute Young Leaders

Honors and

Awards: Member, Honor Society of Lambda Pi Eta
Indiana Associated Press "Best Station Photojournalism"
PRSA Fort Worth Worthy Awards Nominee
Dean's List
Academic Achievement Scholarship Recipient