12-2013

Becoming the Best Mom or the Best Doctor? Gender Inequality and Medical Students' Specialty Choice

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A thesis

presented to

the faculty of the Department of Sociology and Anthropology

East Tennessee State University

In partial fulfillment

of the requirements for the degree

Master of Arts in Sociology

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by

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December 2013

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Keywords: Family Medicine, Primary Care, Medical Students, Specialty Choice, Gender, Physician Stereotypes

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In anticipation of an expected national shortage of primary care physicians, 24 medical students from the East Tennessee State University Quillen College of Medicine were selected through a snowball sample and participated in in-depth interviews. A major aim of the study was to explore the social and economic factors influencing students' specialty choice and career interests. Students' perceptions of "rural" environments, student debt, professional obligations, specialties, and preceptorship experiences were analyzed. Students' gender heavily influenced their feelings about choosing a medical specialty, as did their stereotypes of physicians in particular medical fields. The thesis concludes with recommendations for challenging negative stereotypes about primary care professions and addressing patterns of inequality within the medical profession.

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CHAPTER 1

INTRODUCTION

In the midst of ongoing concerns about Americans' healthcare access and affordability, healthcare system analysts have documented a continuous physician shortage in the primary care physician workforce (Colwill et al. 2008). Despite growth in medical school enrollment, United States medical school seniors filled 59.8 percent of primary care positions in 2013 compared to 62.9 percent in 2008 (NRMP 2013). The trend away from primary care, particularly family medicine, may create significant negative consequences for the health of U.S. citizens (Cullen, Ranji, and Salganicoff 2011). These negative consequences are especially pronounced in rural communities. An estimated 77 percent of rural areas are identified as health professions shortage areas (Doescher, Skillman, and Rosenblatt 2009). By 2025, primary care physician shortages are expected to reach 52,000 vacancies (Viebeck 2012). Furthermore, with the implementation of the Affordable Care Act, recruiting and training primary care physicians is taking on new urgency because the Congressional Budget Office (CBO) projects that 32 million more people will have medical insurance by 2019 (CBO 2012).

A point of entry into this problem is to understand how current medical students enter particular subfields in medicine. Medical students' socialization is likely to provide clues to how the primary care physician shortage continues to grow. In addition to learning how to become doctors, medical students learn how physicians rank themselves relative to other healthcare professionals and within the field of medicine itself. The aim of this thesis is to explore the social and economic factors that influence medical students' career choices and ambitions. Rather than focus solely on medical students' perceptions of primary care, my research takes into account what medical students learn about their profession during their medical training, and how they

envision themselves as future medical practitioners. To carry out my research, I conducted 24 in-depth interviews with students at the East Tennessee State University (ETSU) James H. Quillen College of Medicine (QCOM). I analyzed how medical students anticipate their careers as physicians, how they perceive primary care fields and family medicine in particular, the meanings they attach to different medical specialties, and what factors seem to shape their residency choices.

In exploring how medical students anticipate their future careers, it is also important to learn how they expect to mesh their careers with other adult roles they value. Even though "doctor" will most likely be their central identity, it is not the only identity they expect to hold. Many medical students go on to have families, for example. Consequently, my interviews with students included any family or other interests they might pursue alongside their careers.

The major themes that emerged in my interviews with QCOM students help shed light on the primary care physician shortage. I found that medical students learn to manage their emotions by witnessing uncomfortable situations with faculty and preceptors. They are aware of the significant pressures they face in becoming what they describe as "good" doctors. The students learn that physicians value intellectual activities and the scientific process involved in diagnosing complex cases, analyzing a problem, or performing a difficult procedure. During the socialization process, students learn how medical professionals rank specialties, which influences their career choice. Faculty and preceptors often unintentionally reinforce a status quo when telling students to find what fields "fit" them best. "Fit" is socially constructed and often contains gender stereotypes of what is appropriate work for women and men. Somewhat paradoxically, though, I found that some female medical students seemed headed straight for primary care professions least likely to accommodate their plans to "balance" work and family.

My thesis concludes by discussing the possible outcomes of gender ranking and stereotypes within the field as well as how to challenge the negative stereotypes about primary care professions and address patterns of inequality within the medical profession.

CHAPTER 2

LITERATURE REVIEW

<u>Education Pathway of Physicians</u>

A physician's education begins with medical school, which typically takes four years. During this time, students must take the United States Medical Licensing Examination (USMLE), a three-stage test. Medical students and faculty commonly call the first part "Step One." It covers basic medical principles, and students take it at the end of their second year. Around their fourth year, they take Step Two. During their first or second year of residency, these former students, now doctors, take the exam's final step.

Students usually spend the third and fourth year of medical school in clinical rotations gaining exposure to specialty areas. After their third year, students have spent time with many different physicians in both primary care and specialty medicine. Before their fourth and final year of school, students make an important career decision in choosing a medical specialty and applying to residency programs. The National Residency Match Program (NRMP) is used to place students in a residency position and is generally referred to as the "Match." Upon graduating from medical school, students earn their MD (or DO) degree and begin residency training. Physicians must complete an accredited residency program to become certified to practice in any specialty. Residency programs generally last three to five years but subspecialty training may extend the period much longer. The Accreditation Council for Graduate Medical Education (ACGME) approves about eight thousand residency programs nationwide.

There are about 17,000 graduates from US allopathic (MD) medical schools each year (Kaiser 2011). About 3,631 graduated from US osteopathic (DO) medical schools in 2010, and these numbers continue to rise (AACOM 2012; Fernando, 2010). Most of these graduates

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participate in the residency match programs, either the NRMP or military match, to get into residency. In addition to these United States graduates, another approximately 11,000 international medical graduates (IMGs) also participated in the Match in 2012 (NMRP 2012). The NRMP primarily caters to the MD graduates, but is also accessible to DO graduates and IMGs and offers about 21,000 residency positions per year (NMRP 2012). This makes it apparent right away that there are fewer positions available (approximately 21,000 spots including MD and DO residencies) than applicants for residency (32,000 total including MD, DO, and IMG applicants). If only DO and MD graduates from the United States were considered, there would be more residency positions than could be filled. IMGs are essential to the process, as they often seek primary care positions, even though many of them do not succeed in the Match (NMRP 2012).

The United States government recognizes the problem with having an appropriate number of residency programs for primary care and has enacted the Affordable Care Act (ACA) Primary Care Residency Expansion Program (ACA PCRE). The program offers grants for which public or nonprofit private hospitals, schools of medicine, or other public or private nonprofit entities may apply to help increase residency slots (Catalog of Federal Domestic Assistance 2012). From the government website defining these positions, it is described under *Objectives (050)* that:

> The Primary Care Residency Expansion program is a five-year initiative to increase the number of physicians trained in family medicine, general internal medicine, and general pediatrics residency programs. Grantees are primary care residency programs that commit to increasing their number of training positions by one to four new post-graduate year one positions for five consecutive years. Awards facilitate this expansion by

providing $80,000 per expanded position.

For the first time, the Association of American Medical Colleges (Arvantes 2012) has called for an increase in the number of primary care residency positions to help alleviate a growing shortage of U.S. physicians (AAMC Physician Workforce Policy Recommendations 2012). Given anti-primary care practice stereotypes, which I will discuss shortly, top-down recommendations to increase the number of primary care residencies may address the supply problem without remedying the demand from the prospective physicians. The success of these efforts remains to be seen.

<u>Defining Primary Care</u>

Primary care physicians encompass family medicine, internal medicine, pediatrics, and obstetrics/gynecology. The American Association of Family Physicians (AAFP) defines primary care as:

> ...care provided by physicians specifically trained for and skilled in comprehensive first contact and continuing care for persons with any undiagnosed sign, symptom, or health concern (the "undifferentiated" patient) not limited by problem origin (biological, behavioral, or social), organ system, or diagnosis. Primary care includes health promotion, disease prevention, health maintenance, counseling, patient education, diagnosis and treatment of acute and chronic illnesses in a variety of health care settings (e.g., office, inpatient, critical care, long-term care, home care, day care, etc.). Primary care is performed and managed by a personal physician often collaborating with other health professionals, and utilizing consultation or referral as appropriate. Primary care provides patient advocacy in the health care system to accomplish cost-effective care by

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coordination of health care services. Primary care promotes effective communication with patients and encourages the role of the patient as a partner in health care (AAFP 2012).

It is important to realize that the term "primary care" is not interchangeable with the term "family medicine." For the purpose of clarity in this thesis, "primary care" incorporates family medicine and generalists in the fields of internal medicine, pediatrics, and obstetrics and gynecology.

<u>Issues in Primary Care</u>

The Match is commonly used to analyze the number of positions available in each medical specialty and to gauge the numbers of students filling those positions. Overall, less than 20 percent of medical students go into primary care (AAMC 2012), and only 8 percent into family medicine (Freeman and Delzell, Jr. 2012). According to Perry Pugno, AAFP's vice president for education, medical school deans count all students who enter family medicine, internal medicine, and pediatrics residencies as indicative of those seeking careers in primary care. He explains that many of those entering internal medicine and pediatric residencies go into subspecialty fellowships and do not practice primary care (Gray 2013).

One factor that inhibits the choice of primary care is the generalist-specialist salary disparity (Krupa 2012). Nationwide, primary care doctors' salaries were $156,000 to $165,000 in 2011, the lowest pay of all the physicians surveyed (Medscape 2012). Many specialists made twice as much on average: gastroenterologists earned $303,000, urologists and anesthesiologists $309,000, and cardiologists $314,000. Radiologists and orthopedic surgeons topped the list at $315,000 (Medscape 2012).

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There are many reasons beyond earning potential that deter students from choosing primary care. Exorbitant amounts of daily paperwork, a low insurance reimbursement rate, and high professional dissatisfaction among primary care physicians also matter (Landon, Reschovsky, and Blumenthal 2003).   Others point to the technological advances of specialty care (Kieffman 2012), the poor situations students observe in clinical rotations with trainers and preceptors in the primary care field (Philips et al. 2012), and "bad-mouthing" of family medicine by preceptors (Shapiro and Fornari 2010).   All of these factors gain traction through the culture of the field of medicine.

Procedure-based or "specialty" medicine brings a lot of money and prestige to hospitals and academic institutions (Phillips et al. 2009). This can create an unspoken bias among medical educators who may prefer to train those seeking careers in specialty or subspecialty medicine. If specialists or students interested in specialty medicine receive preferential treatment and other perks, this is likely to influence medical students' career choices. A 2012 GME e-letter from the AMA (American Medical Association) examined 2011 Match data and reported that many graduates were "denied" a residency position (AMA 2012). Many outraged physicians and students alike posted comments about how the e-letter failed to address the number of primary care and family medicine positions that went unfilled during the same year. These statements reinforce the preferential visibility given to subspecialist residency positions by both the AMA and current media.

Nevertheless, some researchers point to income earning potential as the main reason for avoiding primary care, because students have exorbitant amounts of student loan debt (Krupa 2011). A medical school graduate with $162,000 of debt would have monthly payments ranging from $1,500 to $2,100 after residency training for up to 20 to 30 years, depending on the

repayment plan, according to the Association of American Medical Colleges (2012). The median cost of attending a private allopathic medical school has grown at 1.8 times the rate of inflation during the last 13 years. At public allopathic schools, it has grown more than twice the rate of inflation. For public allopathic medical schools, average costs increased from $96,796 (1998-99) to $187,393 (2010-11). Overall debt increases can be seen in Table 1 below. Eighty-six percent of allopathic medical students graduated with student loan debt in 2011 (AAMC 2012). Although the percent of medical school graduates with education debt has remained relatively flat in the last few decades, the average debt levels, which are adjusted for inflation, have more than tripled from 1978 to 2008.

Table 1. Medical Student Debt Averages by Year

Year	Mean Educational Debt
1978	$46,500
1988	$73,200
1998	$117,500
2008	$161,500

Source: "Trends in Cost and Debt at U.S. Medical Schools Using a New Measure of Medical School Cost of Attendance," Analysis in Brief, Assn. of American Medical Colleges, (aamc.org/download/296002/data/aibvol12_no2.pdf)

Many medical educators believe that recruitment and pay alone will not be enough to address the primary care shortage. Medical schools may start admitting 30 percent more students in the next few years (AAMC 2013; Bein 2011). Doctors who are willing to go where they are most needed can often get a big boost from the government in paying back their loans. The federal government is joining the effort by allocating more resources to recruitment, training, and reimbursement for primary-care providers. The United States federal government offers scholarships through the National Health Service Corps (NHSC). With this offer, up to $60,000 in loans can be paid back for two years of service in approved areas such as rural or public health clinics, prisons, and Native American Reservations. Also, people willing to stay on

for six or more years can see up to $170,000 of debt forgiven (NHSC 2012). Unfortunately, very few of these scholarships are given each year. Some branches of the armed services (Navy, Army, and Air Force) have what is called the Health Professions Scholarship Program. It fully pays tuition, fees, supplies, and books for any accredited U.S. medical school and also pays a living stipend for the student, currently at $2,122 per month (HPSP 2012). Students who receive this scholarship will most likely fill a residency spot within the armed forces and commit to a "one-year service for each year paid" of active military duty thereafter.

Recent research from the Robert Graham Center (Phillips et al. 2012) indicates that having higher student debt correlates with a higher likelihood of choosing primary care as a career. This may seem counterintuitive, but students who accumulate debt may have lower career income earning expectations. Compared to their debt-free colleagues, they may not have received family contributions toward tuition because they came from lower income earning households. Conversely, debt-free students may come from high-income households and expect the same high-income careers for themselves (Phillips et al. 2012).

Although pay is one of the main aspects in reward for performing a job, the labor force is becoming more precarious. Notions of collective responsibility have been replaced with individualism and personal responsibility. These social, political, and economic forces are long-standing trends in America that are transforming work, leading to job insecurity and more work hours per week (Kalleberg 2011). As a result of changes in work structure in the healthcare industry, such as an increase in corporate control, many physicians work longer hours with less security, stability, and control over their work activities. These are some of the main complaints of physicians in the Physician WorkLife Survey (Landon et al. 2003). For Kalleberg, a "good job" is one that pays relatively well, gives pay increases over time, provides benefits, offers some

degree of autonomy, control, and flexibility over scheduling and terms of employment. Whereas a "bad job" is one that pays low wages with little prospect for improvement, provides limited benefits, and does not enable workers to have control or flexibility within the structure of employment. These negative viewpoints of physician work life are evident even from medical students.

Medical students at some colleges view the life of a primary care physician more negatively than that of a specialist, citing that insurance payers restrict the quality of patient care and interfere with clinical judgments for appropriate care. They also argue that there is too much administrative work and that they were not sure if physicians had much control over their work schedules. Overall, these students hold negative views of physicians' work life, regardless of whether or not they were primary care physicians or specialists (Philips et al. 2012).

In a 2003 article published by the American College of Physicians on the future of primary care, the authors describe threats to primary care and state that, in some instances, the primary care physician could just as easily be replaced by a nurse practitioner (Moore and Showstack 2003). Thus, the threats of de-skilling (Braverman 1974; Hodson and Sullivan 2011) in primary care may drive away new recruits.

Choosing a Specialty

Researchers point to low prestige (Shapiro and Fornari 2010) and negative stereotypes about primary care medicine, in contrast to other specialties, as discouraging students from choosing primary care -- especially family medicine -- as a career (Philips et al. 2012). Many of the negative stereotypes that students hold about primary care and family medicine physicians are present even by the first-year of medical school (Phillips et al. 2009). The cultural

perceptions of primary care physicians bias students against practicing primary care. Many administrators hope that spending time with professionals in these areas may dispel these prejudices (Kenny, Mann, and MacLeod 2003). Exposure to role models in particular fields is strongly associated with medical students' choice of specialty field (Wright, Wong, and Newill 1997). Members of clinical teaching faculty and the interplay of faculty members and students' experiences guide students toward certain specialties (Paiva, Vu, and Verhulst 1982). The career preference of students upon entering medical school may be significantly related to their career choices (Wright et al. 2004).

In choosing a specialty, students may project themselves into a particular field. Interesting research by Burack et al. explored how medical students "try on possible selves" (Burack et al. 1997). "Possible selves" involve the reflective, analytic, imaginative, and emotional aspects of a specialty choice. Students construct their choices through bias, time pressures, framing, and other factors. When students try on possible selves, they also try on the social environment in which they will function. Burack et al. found that non-primary care students thought that lifestyle, controllable hours, opportunities to do procedures, tempo of the work, exciting settings, and intellectual challenges heavily influenced their specialty choice. Primary care students saw primary care orientation, diversity of the patient population, role models, and overall medical school culture as influencing them the most to choose primary care. Overall, the sense of personal "fit" between students and their conception of specialties mattered the most (Burack et al. 1997). As Burack and colleagues explained, "For some, a specific specialty seemed to round out a broader vision of themselves and their lives, such that choosing a specialty seemed an almost inevitable consequence of their sense of personal identity" (Burack et al. 1997: 539).

Although fit was by far the most frequently mentioned influence, recent studies have shown that students also select specialties on the basis of their projected lifestyle (Dorsey, Jarjoura and Rutecki 2003). A manageable (or controllable) lifestyle offers the promise of having control over professional hours, leaving more time for family, leisure, and other pursuits (Schwartz, Jarecky, and Strodel 1989). The desire for a "better" lifestyle (manageable and flexible) may push people out of the primary care fields. Students entering specialty fields such as dermatology, radiology, ophthalmology, and anesthesiology cite lifestyle as being more influential in their career choice than did students who chose most other specialties (Newton, Grayson, and Thompson 2005). Influence of lifestyle on specialty choice may represent a larger societal trend (Bond, Galinsky, and Swanberg1998). Students indicated that they perceive the primary care specialties as intermediate in lifestyle when compared to other specialties (Schwartz, Jarecky, and Strodel 1989) and students who choose surgery are less likely to be discouraged on the basis of lifestyle, call schedules, or residency length (Ezurum et al. 2000).

In the study by Burack et al. (1997), both non-primary care and primary care students mentioned lifestyle, but they defined it differently. Non-primary care students usually meant control over work hours and leaving behind patient responsibilities at the end of the day. They also usually mentioned prestige and income. The primary care students lifestyle choices reflected their non-work interests and the flexibility of practice structure. Burack et al.'s findings support a constructionist perspective in that medical students attach stereotypical meanings to certain specialties. Gender was not independently assessed in this study, except that women are more likely than men to choose primary care (Burack et al. 1997), which Match data also indicate.

Women in medicine planned to pursue uncontrollable specialties when compared with men in every year analyzed in a 1990-2003 study (Lambert and Holmboe 2005). Both men and

women exhibit a decreasing interest in uncontrollable lifestyle specialties. They classified specialties with controllable lifestyles as those in anesthesiology, dermatology, emergency medicine, neurology, pathology, psychiatry, and radiology. They classified specialties with uncontrollable lifestyles as those in family practice, internal medicine, obstetrics-gynecology, orthopedic surgery, and urology. Schwartz et al. (1989) defined these parameters. They found that women in all groups were slightly more likely to choose uncontrollable lifestyle specialties than men. Men and women both choose careers based on self-fulfillment, but men place more emphasis on financial advantages and manual dexterity skills, while women place more emphasis on types of patients encountered and patient education. Dorsey et al. (2004) found that controllable lifestyle explains 55 percent of the variability in specialty preference from 1996 to 2002 after controlling for required graduate medical education, work hours, and income. Dorsey et al. explain how preference for a controllable lifestyle could significantly alter the composition of the physician workforce.

The focus on "fit" in the physician workforce has been accompanied by a dramatic increase in the number of women entering medicine. With this trend, we find that women are more likely to choose careers based on factors relating to family responsibilities (Verlander 2004). People commonly define family life as conflicting with professional pursuits. This could be a reason that achieving national recognition as a physician-leader is less important to women than it is to men (Leonard and Ellsbury 1996).

In most professional occupations, women struggle with the unrealistic cultural idea that they should excel at both motherhood and a career (Hochschild 2001; Hochschild and Machung 2012). The pressure placed on women to excel at careers, mothering, and relationships is often referred to as the first, second, (Hochschild 2012), and third shift in sociological literature

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(Kleinman n.d.). Women are expected to have careers and earn pay, known as the first shift, take care of children and do housework, called the second shift, and still be emotionally responsible and available for their intimate relationships and family, which is the third shift (Kleinman n.d.).

Even though gender and generational differences may influence specialty choice, an increasing desire for a controllable lifestyle may be only one of many factors. Women can be found in a broad range of specialties, but their patterns of specialty choice are different from those of men (Paimes, Woodard, and Blair 1992). Paimes et al. suggest that some medical faculty "pigeonhole" women into certain fields traditionally considered feminine. Women's attraction for fields that already contain women may explain the scarcity of women surgeons and cardiologists and tell us why psychiatry, obstetrics, and pediatrics are popular choices for women (Verlander 2004; see also Angier 2013).

<u>Consequences of Specialty Choice</u>

Historically women physicians choose careers that offer higher levels of patient contact. In a study by Bergquist et al. (1985), first year medical students' perceptions of gender differences in specialty choice were assessed. Of the first year women, 70.4 percent expected to select a primary care specialty compared with 44.4 percent of men. Among men, 30.8 percent expected to choose surgery compared with 11.1 percent of women. A higher proportion of women than men indicated that patient contact and family life were instrumental in choosing a specialty. Women also expected a much lower income than men (Bergquist et al. 1985).

In a study of 2011 compensation and productivity, mean annual compensation for female hospitalists in family practice, internal medicine, and pediatrics is lower than for males (Ryan 2013). For example, female hospitalists in family practice, internal medicine, and pediatrics have

mean annual compensations of $219,995, $215,012, and $170,535, respectively, or $4,448, $29,211, and $23,402 less per year than male counterparts in similar positions (see Table 2). Even research that controls for numerous observable factors has shown that the gender earnings gap continues to exist among physicians (Lo Sasso et al. 2011).

Table 2. Physician Compensation by Gender (Less Than 1 Year in Specialty)

Specialty	Male		Female	
	Mean	Median	Mean	Median
Family Medicine	224,443	224,894	219,995	220,785
Internal Medicine	244,223	231,960	215,012	210,798
Pediatrics	193,937	197,453	170,535	164,397

Source: Adapted from 2011 Society for Hospital Medicine Report (Ryan 2013)

The data also show that female hospitalists earned $22,000 less per year than male hospitalists even though married female hospitalists with children worked just as much as married male hospitalists with children (Ryan 2013). Lo Sasso et al. (2011) found that newly trained male physicians in New York state made an average of $16,819 more than newly trained female counterparts in 2008, compared with a $3,600 difference in 1999. The authors controlled for specialty type, hours worked, designation of hours, immigration status, age, and practice location (Lo Sasso et al. 2011). The outcomes of unintentional inequalities from sexism are an increasing pay gap between male and female physicians.

Women may be less likely to promote themselves and negotiate with bosses than males who are doing the same work (Babcock et al. 2003). Stratton et al. (2005) studied how gender discrimination and sexual harassment in medical school affect specialty choice. Large percentages (about 90 percent) of both men and women had experienced, observed, or heard of gender discrimination or sexual harassment (Stratton et al. 2005). Compared with men, significantly more women reported that gender discrimination or sexual harassment (45 percent

versus 16 percent) influenced their choice of specialty. Across all specialties, women experienced more discrimination and harassment except in obstetrics-gynecology, in which men experienced more of this behavior and weighed it heavily in choosing a career (Stratton et al. 2005). After the following chapter on research methods, this thesis addresses the social factors affecting medical students' specialty choice including the impact of gender and the specialty stereotypes of the different fields.

CHAPTER 3

RESEARCH METHODS

In depth, one-on-one interviews were carried out with students at the East Tennessee State University (ETSU) James H. Quillen College of Medicine (QCOM), a public allopathic medical school. Personal interviews were used to address what attracts students into primary care professions versus other medical disciplines. The interviews addressed the student's perception of work life, work and family balance, work status, and the importance of these concepts when choosing residency positions. It also examined the student's perception of what they consider a "good" or "bad" job and how this relates to primary care and family medicine in particular. The rising autonomy of nurse practitioners and physician's assistants in providing direct care and the student's ideas on how this might affect primary care physicians were also addressed. A detailed list of the interview questions is available in the Appendix.

This school was purposively selected because of its geographical location and its institutional characteristics. In the 2011 edition of U.S. News & World Reports, "America's Best Graduate Schools," QCOM ranked 6th in the nation for excellence in rural medicine education. For several consecutive years, ETSU has been ranked within the top 10 schools in the country for rural medicine. Additionally, QCOM was recognized in the 2011 edition of U.S. News & World Report's "America's Best Graduate Schools" for ranking 20th in the nation for family medicine education. Approval to carry out the interviews was granted by the Institutional Review Board at ETSU. Characteristics of the medical school are available in Table 3.

Table 3. Characteristics of James H. Quillen College of Medicine at ETSU

Characteristic	Description
Location	Mountain Home, TN
Class Size	72
Average GPA	3.75
MCAT Composite Score	30
Environment Surrounding School	Small Metropolitan Area
Graduates Choosing Primary Care	53%
Female to Male Ratio	50:50

In the in-depth interviews, first, second, third, and fourth year medical students were asked questions to help me understand their perceptions of the primary care and specialist work life. Students also supplied demographic information. In total, 24 students were interviewed. Students from all four years of medical school were interviewed–five students each from the first and second year classes, and seven students each from the third and fourth year classes. Their ages ranged from 22-44. Most of the students were single (15 total), others married (6 total) or had been previously divorced (3 total). All but four of the students were Caucasian. Their mothers' occupations included teacher, surgical technician, insurance sales person, computer programmer, secretary, registered nurse, homemaker, and marketing executive. Fathers' occupations were farm equipment salesperson, electrician, software technician, minister, physician, engineer, and machinist.

Participants were recruited for in-depth interviews through a snowball sampling technique. Qualitative techniques (such as focus groups, participant observation, and in-depth interviews) are routinely used in social science research. In-depth interviews were chosen because they allow for a discovery-oriented methodology resulting in the holistic understanding and investigation of a topic. Interviews are ideal for exploring participants' identities and socialization experiences (Kleinman, Stenross, and McMahon 1994). In these interviews, open-

ended questions are used in an informal conversational context, allowing the respondent to give their perspective on a subject. Respondents' answers were audio-recorded on an iPad and then fully transcribed. Immediately after each interview, I wrote a summary of points that respondents made and anything that the student mentioned that I thought was interesting. After this initial review, I fully transcribed the interview.

The transcribed interviews were analyzed by performing open coding on the first five interviews, followed by focused coding on the rest (Charmaz 1996). The codes that I expected from the interviews, based on past literature, were debt considerations, socialization experiences, positive and negative clinical experiences, attitudes towards patients, and Step One score considerations in choosing a specialty. After open coding of the first five interviews, many emergent themes arose such as gender considerations, women mentioning their "biological clock," female gender roles, the importance of familes and children, the practice of "pimping," the perception of higher ranking students, ambivalence about financial compensation, anticipatory socialization, ambivalence about future expectations, and medical school as a sacrifice. The students' interview answers to each question were assigned according to these distinct codes. Many times multiple overlapping codes were assigned, depending on the themes they mentioned. Each interview was coded indepedently and when the coding was complete, I began writing about each theme, discussing the main patterns and any contradictions. Patterns continued to emerge that indicated important concerns that students raised, which may need to be addressed in order to drive higher participation rates in the primary care fields, and family medicine in particular.

CHAPTER 4

CLAIMING THE IDENTITY AND ROLE OF THE PHYSICIAN

In this chapter, I examine medical student socialization and the themes that arose in the interviews relating to how students manage their emotions and adopt a cloak of competence. Sociologists have thoroughly studied the socialization of professionals, including medical professionals and medical students. Medical students quickly become converted to a new culture upon entering medical school. This culture has its own symbols, language, and norms, which make medical students feel special and privileged, yet inferior to physicians. Even before they begin their training, students learn the significance of these symbols. The White Coat Ceremony, a practice at most medical schools in the United States, distinguishes the medical student from the layperson and makes their new role shrouded and priest-like (Branson 1973). Adopting the white coat, seen as the symbol of the physicians' competence and authority, announces the future physician's role and activity in any setting. In my research, I found that students are still awed by this new position of authority and the importance of the cultural symbols of medicine.

In adopting the physician culture, medical students try to learn how to communicate as medical professionals and are overwhelmed by their emotions about patients and the human body, school and social responsibilities, and their feelings about becoming "special" people (Smith and Kleinman 1989).

The sociological classic *Boys in White* (Becker, Geer, Hughes, and Strauss 1961) examines what collectively motivates medical students, and I, too, found that medical students express idealism about becoming doctors who will care about patients. Students seemed especially apprehensive about taking on full responsibility for patient care and questioned their

level of competence, expressing anxiety about fulfilling their role as physicians. Fears of incompetence come from both males and females, as both groups seemed markedly more concerned about becoming a "good doctor" over and above their concern about specialty choice. While both male and female students express anxiety about becoming a "good doctor," I found that they do not share the same definition of what it means to be a good doctor. For women, being a good doctor means to be able to hold other important roles, like being a mother, without undermining their professional roles. Women are concerned about managing their time well to allow for families. Men were privileged enough to make family time optional, even though many expected to have families. Female students in particular take the possibility of family into consideration, often concerning themselves with how much on-call time they will have as professionals and wondering if they can be "good" mothers. I explore these patterns further in Chapter 5.

Medical Student Socialization

An important part of medical student socialization is taking on a new identity and learning the skills and techniques that are required of the culture. To medical students, becoming the idealized physician means becoming a dedicated, competent, sympathetic care provider who is not at the mercy of health insurance, or anything else that might infringe on their authority and autonomy as professionals. Before they become real doctors, they adopt the perspective of physicians. For example, when the students talked about the future of medicine, the pressures of healthcare costs, and the looming insurance changes in the United States under the new Affordable Care Act, they spoke about these changes as if they were currently facing them, even as students. As they anticipated their future role as physicians, the students assumed that the

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ACA would interfere with it. The students were never directly asked about insurance but showed their ambivalence about it by introducing the topic in every interview. A third year female describes this concern:

> When I don't have the time or the resources to help a patient as much as I think should be possible. Umm… Like when an insurance company limits a stay or won't pay for a medication that I think this person really needs or won't pay for therapy after so many times. Those limits that other people set that I don't have a say in… that will be most frustrating.

Another student, a third year male, also agreed that insurance would cause him more frustration than anything else as a future medical practitioner, and he relayed this when he said, "Umm… dealing with insurance companies and them trying to say that patients don't need services that I think they need. That's the top one, two, and three [of my future concerns]." In anticipating conflict with health insurance corporations, students chafed at limits on their autonomy as medical professionals.

Students, as future professionals, expect that autonomy in decision-making in their future careers is important in helping to define them. Professionals have a distinct purpose where they set boundaries and guard against change they feel may threaten their autonomy (Hodson and Sullivan 2011). Students indicated that for them, autonomy occurs when physicians are able to make un-coerced, independent decisions. Authority is the power to influence or command thought, opinion, or behavior. Students spoke in ways that defended their new social identity and validated their hopes as physicians (Goffman 1963).

For example, students emphasized the importance of autonomy when we discussed the impending primary care physician shortage and the role of nurse practitioners and physician's assistants in meeting the shortage. Most of the students were initially positive when I asked how they felt about nurse practitioners and physician's assistants taking a larger role in primary care.

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The responses started out with some version of the students discussing that both physician's assistants and nurse practitioners have an important role in delivering medical care to patients. Later in their discussion, however, most of the students spoke negatively about the knowledge base and training of nurse practitioners in comparison to their own. As a second year male put it:

> I mean, if there's not enough primary care physicians and they are just filling the void, then like, what else are you going to do? They are going to fill that demand. It's supply and demand. I do feel like [non-physicians] are trying to push for more autonomy, and its like, you didn't go to med school. You can't have that. You didn't train for 15 years. I mean, the bottom line is that you don't know what a physician knows. I think it will be interesting to see how this all plays out. I think that feeling that they are encroaching on doctor's territory is just irritating, basically.

The students seemed more open to physician's assistants taking a larger role in patient care, but they were not open to nurse practitioners. This may be because the term physician's assistant reassures them that physicians stay in charge, whereas a nurse practitioner might practice medicine and threaten the hierarchy that establishes medicine over nursing. Some clinical decisions require authority from a physician before any nursing action is taken. Historically, these boundaries have often been unclear, resulting in friction and tension between doctors and nurses (Coombs 2004). A fourth year male student offered an explanation for the students' opinions about nurse practitioners and physicians assistants:

> On a bigger level, I think NP's and PA's have to be separated a little bit. PA's have never said that they wanted to have a scope of practice apart from physicians, ya know, their national organizations never made that a priority or established a desire to do that. The American Nursing Association, however, the ANA, has been lobbying for independent scope of practice, which I do have a problem with. If you want the scope of practice a physician has, you need to go through all the training. An advanced degree over three years does not equate to four years of medical school and three to seven years of residency.

By pointing to at least twice as many years of medical training, medical students emphasize that their special knowledge and training sets them apart as professionals and challenges the professional status claims of nurses (Hodson and Sullivan 2011).

All of the interviewed students volunteered their disapproval of the autonomous practice of any non-physician. By protecting the profession of physicians, they could preserve the specialness and higher status of medicine. They also expressed the sense that physicians, unlike others, had earned the right to be autonomous and have a supervisory role over other medical caregivers. Consequently, students felt that only physicians should run clinics because, in their minds, only physicians have the training and knowledge to be able to do it effectively. As a fourth year female student remarked:

> I don't have a problem with it [nurse practitioners and physicians assistants taking a larger role in primary care]. Especially, in my field. Having mid-level providers on low risk prenatal care... I don't think they should be independent though. Their level of clinical training hours are 2,000 while ours are over 20,000. Those are not equivalent. I think that there's a place for them but they must know their place. Physicians should supervise mid-level providers.

By calling physician's assistants and nurse practitioners "mid-level" providers, the student adopted the persona of a higher status professional. A second year male student said he didn't trust the training of nurse practitioners because "… schools are just popping up everywhere." Even though there is a considerable need for these providers, by questioning the growth of nurse practitioner programs, the student implied that they hold lower, questionable standards when compared to medical schools.

Most students brought up how they effectively had more training than a lot of people in nurse practitioner programs would before they graduate medical school, and yet, they still had "no idea how to really take care of someone." Their uncertainty highlights a sense of liminality that is common to people undergoing a rite of passage between two social positions (Van Gennep 1960). Students explained that they were "scared to death" at the thought of making medical decisions for patients because they did not feel ready. The idea that medical students criticized the competence of nurse practitioners and then talked about their own fears of

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incompetence is interesting. On one hand, it signals the high standards they hold, but on the other hand, it shows that as they participate in medical school as a rite of passage, they lack complete trust in their own education. Most seemed to feel excited and reassured to have residency years to "learn how to be competent." A fourth year female student said that although she had no idea how to practice "good" medicine, yet, she points to her anticipated frustration with other practitioners:

> [If I could imagine myself in practice, what I foresee to be the most frustrating aspect is seeing] other people practicing bad medicine on my patients. I have no tolerance for that. I'm not in a place right now to say what bad medicine is exactly [laughter] but I like to think I will be well trained and keeping up with literature is important to me. But to see other people not doing that, I have no tolerance.

The importance of the topic of autonomy to medical students may be because they partly develop their professional identity and their sense of social position through professional inclusivity and social exclusivity (Weaver et al. 2011). Students experience this professional inclusivity when they attend clinical rotations and are treated as future physicians by doctors, their professors, and patients. They act out this inclusivity early on, by knowing exactly who is included in the role of physician and who is not. They are exposed to social exclusivity by removing themselves from students in other fields and all non-medical students (Weaver et al. 2011).

Because of the autonomy and authority they will someday have as physicians, students feel pressured by the high expectations placed on them. The students have a stake in defending the hierarchy because they will soon receive privileges from it. Pressures from the medical culture are an important part of the "hidden-agenda" in training students. The informal, yet powerful system of self-regulation by rewards and penalties reinforces behavior expectations (Chunzi et al. 2012). The pressure of public opinion and the fear of "losing face" serve to

maintain cultural norms and to constrain behavior (Chunzi et al. 2012).   The sociological

concept of "saving face" means using strategies that maintain honor, prestige, or status in social

situations. The maintenance of a positive outward self-image is important (Goffman 1963).

Students are often not able to express the fears they have about managing patients and making

important medical decisions in order to "save face" with non-medical students or outsiders to the

medical community. A student commented on these pressures when she said:

> It's scary when you graduate at the end of four years and you think, I now have the sum
> of knowledge that I am going to have when they allow me to take care of actual patients
> and my signature now means something. It's scary… July 1st is coming and it's going to
> be a scary day. [laughter]

Concern about the future expectations that the students will face seemed to be an

important topic throughout all four years of medical school. All of the students interviewed were

in touch with what the profession of medicine would expect from them, and they felt at odds

with it. They brought up feeling scared about future responsibilities, how they would handle

certain situations, and how they would meet both social and medical expectations. As this third

year female explains, "I dread having a clinic, which is bad, especially since I'll probably do

family medicine. The predictability and planned out nature forever. I don't want to know who is

coming into my office at 2:30 on June 1, 2015. I just don't." In addition, this student was

expressing her lack of excitement about family medicine. Future responsibilities and

ambivalence about becoming a professional was a concern for another third year female as well:

> I finally had to come to terms with the fact that I am probably not going to find a
> particular niche that I am just wildly passionate about and wake every morning excited to
> go to work. You hear people say to pick what doesn't feel like work but… I'm not that
> kind of person. I like doing a lot of different things. So I am worried about trying to be an
> adult professional person and being able to be flexible.

Medicine is often seen as the model profession (Becker et al. 1961). Students' long

lengths of training and personal sacrifices legitimize their entry into medicine and their status as

future medical professionals. These sacrifices also play a role in how the medical students estimate their monetary worth. Medical school debt is shown to influence medical students' specialty choice (Krupa 2011), but I rarely found this to be the case. Only five of the 24 students told me that their debt would definitely push them into specializing. Four of these five students were third and fourth years, and one was a second year student. As upper level students, the few that had debt concerns were probably more in tune with the fact they were in a lot of debt and would soon have to start repaying it. All five of the first year students did not support debt concerns influencing their specific interests in specialties. Most students were idealistic about their school debt, anticipating that they will be well compensated as physicians regardless of what specialty they will eventually choose.

Students made it clear to me that while they might not feel anxious about debt, they felt a sense of entitlement about money. They believed that money would compensate them for their symbolic sacrifices in getting their education. In almost all interviews, the students said that medical school had taken a toll on their personal wellness and most of them reported not eating or sleeping properly or being able to exercise enough. A third year male student describes these sacrifices:

> I think nutrition has been decent and sleeping, not so well... There were times I didn't work out enough. I told myself, hey, you have to do this! It's hard because you want that extra few minutes to study and you sacrifice other things to have it. First year was pretty tough but second year was by far the worst. I was just worn out mentally, and they keep you going. Test this day, test that day, this class and that class and then extracurriculars and then boards. There's no time to do all the things you may want to do. You sacrifice a lot. You sacrifice things you like and even yourself sometimes to do what's best for your education.

This notion of sacrifice and being compensated is a part of medical student culture. To the students, this feeling of sacrifice seemed to be an expected part of their socialization and a "rite of passage" into medicine, as this third year male medical student commented:

Umm… yeah, to some degree [I will choose a specialty based on compensation]. I mean if I am picking between a couple things I like, money will be a factor. How could it not be? I've been in school for so long, I think often, [if] it were *all* about the money, I could have done something else and come out ahead, but I mean, money matters to some degree. You have to be trained regardless and being able to pay back debt and still afford to do things [i.e. have a car, a home, or participate in other activities], that will be important.

For students, the prospect of being compensated and rewarded for sacrifices is rational. Students in programs outside of medicine are less confident about compensation prospects and debt (Nelson 2007). To a professional, or future professional, money is often a taboo subject, which can be emotionally uncomfortable, even in an interview setting. Although most of the students felt they "deserved" decent compensation because of the time and efforts they put into school, at the same time, they were ambivalent about compensation and no one would put a dollar amount on what they thought they needed or what they thought they should make. Thus, monetary compensation is important to the students but not always in determining their choice of specialty.

<u>Managing Emotions</u>

One of the hallmarks of maintaining the high status of "professional" is the ability to keep a social distance between the professional and the patient (or client). In order to keep this distance, students learn from example to rely on managing their emotions to achieve the professional norm of affective neutrality (Smith and Kleinman 1989). One of the main ways medical professionals manage their emotions is to transform the patient into an analytical object, providing the physician with comfortable feelings about practicing "real medicine" (Smith and Kleinman 1989). This is a part of the hidden curriculum of medical school and the professional culture of medicine. The long hours of studying and academic pressures that medical students face help to provide them with a barrier against uncomfortable feelings and prepare them for

their special status as professionals (Becker et al. 1961). Yet students do not automatically know

how to manage their feelings. They learn through their interactions with patients and other

medical professionals. A third year female student spoke about practicing emotion management

when she answered a question about her worst clinical experience:

> "Yeah... umm... it was seeing a patient die for the first time. Seeing them die alone in the hospital. That was awful. I think if someone had been there [with the patient], it wouldn't have affected me so much… I guess we eventually get numb to it, I don't know."

When asked about their worst experience, most of the interviewees cited "communication

issues" they had witnessed with physicians and patients. These so-called communication issues

were invariably emotionally uncomfortable interactions and situations. Most of these instances

were about physicians not communicating well with patients and not being emotionally available

for patients. When asked, they overwhelmingly said that they did not confront the physicians

whose actions they found disturbing but vowed to do better when they become practicing

physicians. Most of them expressed some sympathy saying that those doctors probably thought

the same things when they were in school and, as a second year female put it, that sometimes the

pressures of medicine might lead physicians to "lose our way."

> I was with Dr. Brabson* and there was this family in the room. A mother and two daughters and he told the mother that she needed to go into the hospital and start the process of creating a living will and one of the daughters starts crying and he completely ignores her. I just really thought he should have talked to the daughter. Maybe I not ought to have done it but I talked to the daughter and asked her what was going on and she told me that she had just got out of rehab program and it was an emotional time for her. I just think he should have acknowledged that she was upset. He didn't even notice her. How do we lose our way? I don't know.

A third year female student described an uncomfortable situation she experienced:

> We had maybe 6 minutes with each patient, and that was tough. Especially with [pediatrics], because the parents are like, I really think something is wrong. And the doctor is like, "no, they have a cold, and I need to go now because there's 10 other patients waiting." I can't think of one single experience, but overall, that rushing and impersonal stuff, it was bad.

Another interesting comment from a third year female student focuses on the students'

ambivalence about senior physicians appearing emotionally detached from their patients:

> This woman that ran the clinic was worked to the bone and one day I went in and she was like, 'we have to go in this room and tell this guy he has brain lesions.' Three brain cancers in his brain for sure and if you have more than one it's metastasized so it could be anywhere. So we go in and tell this guy and his daughter and they are crying and I am crying and she [the physician] was just like, "here's what you have" and she walked out. She wasn't completely not sympathetic but she was removed from the whole process. We left the room and she was like, 'okay, this next patient has seasonal allergies.' And I was just in awe, like, I needed to her to talk to me about it a little bit.

Students are taught they should demonstrate affective neutrality with patients but also are

taught to be empathetic. When students see doctors appearing detached or unfeeling, without

signaling empathy for patients, they feel uncomfortable and conflicted, even though the students

are witnessing the hallmark of professional distance between professional and client. A second

year male student described his ambivalence over witnessing this practice:

> It frustrates you. Because if you are the one that's sick you are tired and exhausted and your family probably is too... Umm… and when you have someone that is not emotionally available to you or doesn't seem to empathize with what you are going through, it is exceptionally frustrating.

A fourth year male described his uncomfortable experience, vowing to do better and be more

patient-focused when he is in practice:

> Clinically? I don't think… I think the only time I would say it's bad, but you can grow from a lot of this stuff. But sometimes some of the physicians… you are taught all these communications skills, you see them throw that out and they don't have good bedside manner. They don't have… they don't build rapport and they don't seem to care about the patients. Those are the times you are like, come on, you can do better than that.

Medical students receive training in communication skills that past generations of

physicians may not have received. The students find this contradicts how they are being taught to

practice medicine. Yet, since the physicians have power, students rarely criticize them.

<u>Adopting a "Cloak of Competence"</u>

Competence is an important part of the physician identity. Another way that students handle their emotions and deal with the uncertainty and worries of becoming physicians is to adopt a "cloak of competence" (Haas and Shaffir 1977) to cover up their fears of incompetence, and to soothe the anxiety that they feel because of the demands of their role as future physician. A third year male remarked, "Just getting through the training and the responsibility that you have afterwards. You're the one now, no one is telling you what's right or not right. That can be scary, I'd say." Becker and colleagues present the case that many students choose to specialize so that they can be confident of knowing one field (Becker et al.1961). Reflecting on the significant pressures of what it means to be a competent physician, a second year female student remarks:

> We were down in the ER and there was this little old lady, she didn't look super sickly, kind of reminded me of my grandma, so I was immediately like, I love that little old lady and while we were moving her she looked up at me and she was like, "take good care of me and make sure they take good care of me." I was thinking, holy crap, the responsibility of being a doctor really hit me at that point. She was scared and she saw me in the white coat and I was thinking, oh please don't trust me with your life. I was like, oh my, people are going to trust me with their life, ya know? That's somebody's grandma.

For the interviewees, one of the most positive aspects of their new identity is the importance of being good doctors. Good doctors are competent individuals who make people better versus "bad doctors" who are incompetent and harm their patients. They have educational pressures to maximize learning so they do not become "bad doctors." This "good doctor" role is their goal, and it is how they want to be perceived by the community, as this student explains: "My biggest fear is harming a patient. That really worries me. And money may be an issue if I own my own practice but I'm more concerned about harming someone." Students are usually aware of the Hippocratic Oath before they begin their medical training. An important statement

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attributed to the oath, but that it does not explicitly contain, is Florence Nightingale's dictum,

"first, do no harm" (Leape 1994). The "good doctor" uses this as a warning against medical

error. The students see this role of the "good doctor" during clinical rotations. They watch other

physicians in practice, observe their working habits, and take note of their competency, as this

third year female did:

> Well, there's been a lot of good things. It's hard to say what has been most positive. I guess overall the most positive experience has been with this one particular kid we had come in... On [pediatrics] rotation. Just seeing how sick he was and all that the doctors I was with did to help him and he got better. From where he was starting from, it was pretty great to see that. He had a rough time and just being there through that progression and watching him get better. That was pretty great. It's good to know and see that on longer rotations... that people do get better and it gives you some hope, like, someday I will be able to help people get better like that, even when they are really sick.

A third year male student describes his desire to be a good doctor:

> I mean, I guess, like everyone else -- making a mistake could be life threatening to your patient. That's when stuff becomes real when you push meds that are dangerous to push. Even if you follow the wrong protocol or have a bad diagnosis then you could cause more harm than good. We have to be good.

The fears of being an incompetent physician weighed heavily on the minds of almost all the

students I interviewed, even early in their training. As a second year male explains,

> Being helpless. Having demands that you simply can't fulfill. Whether its intellectually or you can't make a diagnosis and you cost someone their health or their life and feeling helpless or you have it figured out and you don't have the right tools. That would be the worst for sure.

A third year female student talks about how important the residency training years are to

becoming a competent physician:

> At this point in my training, I do not feel even remotely confident. I hope that happens sometime in the next year, that is what weighs most heavily on my mind. I don't feel ready. Since I've been let loose in the clinic, I can see how freaking much there is to learn in order to be safe with patients and I just hope I can learn all that in the next year. Thank goodness I have three years of residency.
>
> Almost as important as being the good doctor is receiving acknowledgment for it.

Acknowledgment legitimizes the students' role as good doctors. When asked about their most positive experience or ideal job description, 11 of the interviewees had a story about being thanked for something they had done for a patient. This second year male highlights the importance of acknowledgment when summing up his ideal job description, "All my patients would be exceptionally thankful for everything that I've done. I would have really awesome, really interesting cases. I would have great support staff and great nurses and PA's." Another second year male talks about his prior medical experience when explaining what will bring him the most joy in his future practice:

> That's a fairly easy one then… there was a kid that had fallen and had a pretty bad head trauma. He had fell off a house actually. We got there. Maybe we didn't do too much, but the kid actually called and thanked me. He had a bleed and we had caught it early. But that was really great just because he was a kid and said hey I really appreciate you doing this. That would be one of the cooler things.

Recognition is the personal acknowledgment of someone's efforts. When this happens, people are afforded some type of special status or classification. This also helps the soon-to-be physicians fit with what they feel is their identity -- to be the "healer." Recognition of that identity makes them feel respected and esteemed. A third year female listed gratefulness as the reason that she wanted to pursue a career in medicine, "All of mine [best experiences] have been when you make connections with patients. The gratefulness… that's why I want to do medicine."

Male medical students were slightly different from the females in how they defined "good" doctors. Many of the female medical students expressed that they will be "settling" in terms of being good doctors because of the additional expectations placed on them for raising and caring for families. I will return to this topic in the next chapter to analyze in more depth how men and women perceive their careers.

CHAPTER 5

PHYSICIAN RANK, GENDER, AND SELF SELECTION INTO SPECIALTIES

In anticipating their future role, students went beyond differentiating "good" versus "bad" doctors. They also differentiated specialties on the basis of how scientific they seemed, referring to some as "real medicine" and others as not "real medicine." The students envisioned "real medicine" as those fields that were more highly scientific or highly procedural fields. Medical students who have been studied in the past also identify contact with the body as "real medicine" (Smith and Kleinman 1989). This brings importance to the topic of "procedural medicine," which came up in many of the interviews as an important consideration in choosing a specialty. "Doing procedures" is given a higher and more special status because it allows the medical professional to focus on one part of the body. It also allows the physicians to become experts among their peers, giving them a higher status compared with generalists.

Other specialties also have negative stereotypes that medical students reinforce with disparagement. Pediatricians, for example, have lower status than other specialty fields. A female student described the comment she received when telling her male mentor what specialty she was interested in. She said: "yeah, but just picking on me really. I told him I liked kids and he said, "veterinary medicine, next!"" Veterinary medicine is far below medicine in status, further reinforcing the negative stigma about pediatrics. A male student described why he would not choose to be a pediatrician by saying, "I feel bad for them. Basically they work for free. They have runny nosed kids to treat." A third year female relays her stereotype about pediatricians when she commented, "they are friendly and always happy-go-lucky and fun. They seem less stressed and more relaxed than other fields do."

Psychiatry is also seen as a lower status specialty. A female student said she had been talked to a few times about how she should pick psychiatry, but she was ambivalent about it because "they aren't real doctors and don't use their training." Another said psychiatry was a "waste of a medical education." The stereotypes seem to be that psychiatric doctors are pill pushers or they must be "crazy themselves." On that note, I only interviewed one female student definitely choosing psychiatry and two more females interested in it but who brought up the stereotypes in a way to show their ambivalence about it. As this female third year student demonstrates when she was asked if she had ever been bad-mouthed over her interest in a specialty, she replied, "not really badmouthed but I've had people say, you are too good to do that! Just saying I'm too smart, I had one teacher say that I was too good of a student to go into psychiatry."

Students stereotype other fields favorably. Surgeons were typically thought of as men in the field of medicine, were said to be egotistical but very knowledgeable, and "some of the smartest" people in medicine. They were also given attributes like, "not interested in the social aspects of the patient," "not great with building relationships with patients," "can handle all situations," "like working with their hands," "hardest workers in the hospital," "the money makers for the hospital," "family not a priority," "divorce rate is high," "meticulous, focused, and structured," "everyone depends on them," "manly, tall, strong, and matter-of-fact," "very driven and passionate," "they are the gods of the OR [operating room]," "they are very involved in the hierarchy," and "intense." One female student described it like this:

> So surgery is awesome. I spent time in CT [cardiothoracic] surgery and there the surgeon is like god. He doesn't even look up or ask for things, he just holds his hands out and what he wants appears there. And on one hand, you are operating on someone's heart and efficiency is very important and accuracy too. You don't want to look away from them. [starting to smile and turn her head at this point] That sort of omnipotence may not always be the best thing for people.

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Family medicine stereotypes were mostly centered on how the family medicine physician is the "jack of all trades." Other students commented that the family medicine physician is "nice," "relatable," "not out for money," "likes a range of patients," and is "the person that knows the community best." Internists, however, were seen as more knowledgeable than family physicians and better "thinkers."

The sheer volume of knowledge that medical students are expected to absorb in medical school, as one student put it, is like, "opening your mouth for a drink of water from a fireman's hose." This analogy sums up the overwhelming volume of materials that a student is expected to learn in pursuing a medical education. One way to deal with it is to compartmentalize the body. "Procedural" is a euphemism, meaning that it is a way for students to carve up their world in a way that sounds neutral but that hides inequalities. Procedures are activities that are perceived as being highly skilled, scientific, and give the students a sense of privilege and expertise more than that of the physician who merely talks to and interacts with patients. When a patient can be divided into compartments, as most of the medical specialties allow, the body loses its personal and emotional significance. Comments from a third year female:

> Umm… Something procedural. I could see myself being "the surgeon." You know, there's a problem, you take care of it and it's done. I don't know if I see myself managing care for years. Like, "take this med and come back in six weeks. Oh, that didn't work, so try this one and then come back." I like taking care of things, working with my hands.

When the students are practicing "science," they are comfortable. Scientific practice is associated with practicing "real medicine." Science is assumed to be objective and devoid of feelings. The practice of medicine is then intellectualized and that intellectualization makes for the "superior clinician." In these ways, specialty practice epitomizes "real medicine," in which physicians exhibit detached concern and transform the body into systems and science. This is how some

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specialty practices earn a special, higher status over the clinician practicing family medicine or pediatrics. In the latter, patients must be seen as a whole; the psychosocial aspects of what makes a whole person, and not just a body, are not as easily ignored. In other words, in general medicine, the body is not so easily separated from the person who inhabits it.

When the emotional or psychosocial aspects of a patient must be acknowledged by a physician and subsequently taken into consideration for the patient's care, the esteemed "science" of medicine is lost. Once the students are successfully socialized, they don't want to do the low-status "dirty" work (Hughes 1962) that other people say is not even "real medicine" or "real surgery." Some specialties within medicine entail different degrees of what sociologist Everett Hughes calls "the handling of the human body." (Hughes 1961: 62). The "dirty work" is often lower paid and lower status work and women typically occupy a larger proportion of the lower status specialties within medicine–the specialties with more direct human contact. The 2013 graduating class Match Outcome at Quillen parallels these findings. Sixteen students matched Obstetrics and Gynecology with 14 of these students being females. Five students matched in pediatrics and all were females. Conversely, six students matched in emergency medicine and seven in surgery and only one of each specialty was female. Thirteen students matched in internal medicine and nine in family medicine and about half of each group was female.

Two of the students who were interviewed, when asked about primary care in particular, said they probably wouldn't choose primary care or family medicine because they wouldn't have the time or ability to pursue other professional interests that were important to them. They each experienced the monotonous work of a family practice physician and were turned off by rushing from patient to patient all day, without time to, as one student said, "think about other things."

This suggests that they could not engage in other intellectual activity that they have learned that physicians, as a group, value. A first year student said that one of her focuses would be on healthcare and the importance of public health measures, and that a family practice physician doesn't have the time to pursue those interests. Another student mentioned how low reimbursement rates for billing services to insurance companies in family medicine increases the need for physicians to treat more patients each day. This leaves less time to consider the more complex cases and to stay current with the medical literature. In other words, these things get in the way of practicing "real medicine" and do not leave time for the practice of science -- the ability to think objectively and carefully analyze a problem.

Pimping

During my interviews with medical students, I was enlightened about a common practice in medical education called "pimping." Although this was not an original subject of interest when preparing my interview questions, it came up in the second interview, so throughout the rest of the interviews I asked each student to tell me what "pimping" was and what it meant to them. In an article entitled, "The Art of Pimping," the author, a physician, calls pimping an important skill in medical education (Detsky 2009). Brancati (1989) defined the act of pimping when an attending physician, the "pimper," poses a series of difficult questions to a resident or medical student, the "pimpee." Brancati outlined suggestions for attending physicians to further hone their pimping skills and methods that medical students could use to defend themselves from it. Further articles have highlighted the importance of this practice in receiving a medical education.

In interviews with the students, I learned that "pimping" is a euphemism for when someone more powerful, such as the physician or lecturer, dominates someone less powerful,

such as the medical student. The fact that "pimping" is a colorful moniker from the world of prostitution does not seem to strike people as odd or unacceptable. It turns the pecking order and hierarchy of medicine into something to celebrate. It's also about the medical students learning that they have low status and pointing out the hierarchy of interns, attendings, and practicing physicians. The medical students interviewed said that it was an important way to let them know who is in charge and to humble them in case they have a big ego about being a medical student. In other words, most students said it was a good way to "put students in their place."

Most students used the term "pimping" to describe being asked questions until they failed to have correct answers, making them look, as they put it, like idiots. The sexual subjugation that is implicit in the phrases "pimping" and "being pimped," equates medical knowledge and sexual power, with physicians as pimps (typically coded as a male role) and students as prostitutes (typically coded as a female role). Thus, when medical students, regardless of their gender, are intellectually subordinated, "being pimped" puts them in a lower social position. In a patriarchal society, the lower status position is that of women.

Unfortunately, this behavior unintentionally reinforces sexism and makes the social harms of the language invisible. The "pimp's" role is acceptable and seen as positive. Accepting the terminology of "pimp" legitimizes the social roles of the "pimper" and the "pimpee." Sociologically, pimping behaviors lead to the "pimp" being viewed as an extension of accepted masculinity. Medicine's roots are masculine in nature and only recently have women's numbers dramatically increased in medical school (Bickel 2001). The "pimp" ultimately represents a "real" man through behaviors that victimize and exploit women.

Most male medical students described pimping in a very positive light. One male fourth year student describes this behavior:

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I think that you need to demonstrate where you are at knowledge wise. I think if people are asking you critical questions to ascertain where you are, that's a good thing. It may hurt your feelings a little bit, but I think it identifies weaknesses and strengths in your own medical knowledge. I think people just don't want to be evaluated sometimes. I think its essential. It's not malicious. I will do the same thing when I am working with students. I don't see anything wrong with that. People seem to just want to show up and not get criticized or get any feedback. That's not a good thing. There has to be a standard that you rise to. It's important to be around people who challenge you, and its important to seek that in life, to be surrounded by people that raise the bar.

Pimping behavior also legitimates being competitive. A second year male student described being pimped by male professors as well:

Someone is pimping you for answers in that they want you to produce answers… and usually it'll be, 'What do you see here?' And then they'll say, 'What does that mean?' And then they'll say, 'What mechanism is that biochemically?' and then they'll ask you what the gene defect is or whatever and they will keep going until you miss. And it's usually around a bunch of people or other students. And then they are like, 'You don't know anything!' It's not so much mean, but a very humbling process that gets you on top of your game quick.

Most of the time, an educated person who has endured around seven years of training would think that being told they did not know anything was negative, but I did not find that male students thought is was negative behavior at all. Women also felt mostly positive or neutral, as this comment from a fourth year female illustrates:

Pimping is odd... just means you are asked questions a lot until you miss something. It gets you on your game. I wouldn't say it's negative. It's just part of it. You want to practice medicine; you have these traditional things that have always been done. It helps you to learn and it lets you know you aren't the smartest cookie in the box. [laughter] It manages your ego in a way.

"Tradition" legitimizes the practice and makes it harder for people, especially women, to challenge, if they, too, want to join the high-status club of medicine. Although most women felt positive or neutral about "pimping," two of the women interviewed felt very negatively about being pimped including this fourth year student:

It's a normal, daily occurrence in specialties that draw the big egos -- like surgery. One of the emotional transitions you have to make is realizing that it's going to happen, and it's

okay not to have all the answers. You will probably be feeling demoralized. They may not call you an idiot, but they will let you know that you are. One guy asked me for the 35 causes of hepatitis. It's an arrogance thing. I don't think it's about teaching. The ones that ask then stop so they can teach you and those that make you feel stupid are different.

Pimping, according to the interviewees' comments, seems to be common amongst all specialties but especially in surgery. It seems to be an accepted "degradation ceremony" (Garfinkel 1956) in medical training. Since males saw it as positive, the males being "picked on" with questions may have seen this competitive, dominating approach as the way that attendings and residents were teaching and molding them into future surgeons through traditional teaching practices. This is not to demonize the many positive advantages of asking medical students and residents tough questions. As one student put it, "asking questions in a positive way really lets you know the level someone is at in their knowledge and training." It allows teachers to have conversations with students on where and how they may be behind, and it lets them know where they stand among their peers. These are positive ways that an attending physician can help a student learn. Therefore, asking questions is not always negative, but the manner and language that we assign to this behavior matters because it can unintentionally harm women, while at the same time, unintentionally privilege men. Also, if physicians ask questions in a domineering, aggressive manner, domination is reinforced (Baker-Miller 1976).

The idea that men may be receiving more favor from faculty is not a concept limited to medicine. Academic science faculty in general, both male and female, have been found to have gender biases that favor males (Racusin et al. 2012). In a recent study, science faculty from universities within the United States rated the application materials of particular students who were randomly assigned male and female names. Faculty rated the "male" applicant as significantly more competent and hireable than the identical female applicant. The applicants with "male-appropriate" names were also offered a higher starting salary and more career

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mentoring. Female and male faculty members were equally likely to exhibit this bias against the female students (Racusin et al. 2012). This behavior of unintended bias impedes women's ability to excel in science careers, since mentoring is often a tool for success in the workforce. Pimping then, as the language suggests, can be a barrier to women because of judgments about their competence and ability compared to that of men.

The street version of pimping, as described in sociological literature:

> …there has been an increase in socialization towards glamorizing the pimp role, which as a result, is now moving away from the traditional understanding that portrays the pimp as an oppressor and exploiter of women. Ultimately, the conceptualization of the pimp has transformed into the socially acceptable representation of the 'cool guy' in the dominant culture. Pimping, due to the style of this profession, has undergone a semantic shift from procurer to refer to any 'smart' person (Quinn, 2000, p. 124).

Even when comments by women about pimping are neutral, accepting it as everyday business does not make pimping a neutral practice. Women may be getting more "mentoring" for more "gender appropriate" professions like obstetrics and gynecology, pediatrics, or general medicine and ignored for more "male appropriate" professions like surgery. A third year female talked about how she was ignored during some of her rotations, when she said, "[Attendings in clinical rotations] were all pretty good. If they aren't good, they ignore you, so you just deal with it." The behavior of "pimping" is unintentionally sexist. Even if the physicians using the terminology are not intentionally trying to create a sexist medical culture, the culture is still being reinforced. I will explain other, related harms of this language further in the next section, when discussing the inequalities in how male and female medical students are being treated in different medical specialties.

Gender Influence and Specialty "Fit"

Differentiating specialties, pimping behaviors, and mentoring men and women differently for certain specialty fields creates gender-segregated specialties. A fourth year female remarked

that surgeons are often protective of their patients, but they were thought of as "highly intelligent" and "egotistical" in a kind of admiring way. In obstetrics and gynecology though, if physicians and students act protective and look out for their patients, then other students and physicians refer to them as "bitchy" and "catty" and they are often seen as "aggressive females" who are "protective and crazy." The female students calling each other "catty" unintentionally reproduces inequality, and sets them up for unequal levels of pay while tracking them into particular specialties. This fourth year female described her stereotype of obstetrics-gynecology when she said, **"**Because there are so many females in it, it can get competitive and bitchy sometimes. Definitely compassionate, they see the emotional and psychological side of medicine and are hard working and dedicated." This comment highlights that women sometimes meet the gender norms set for them in being the physicians that deal more with patients emotional concerns. This behavior unintentionally sets men up as legitimate physicians and women as deviant because women are taking for granted their secondary status. It also sets the standard that "this is what real medicine is versus not real medicine" and "these are what real surgeons do versus not real surgeons." A female student was describing the comments she hears about obstetrics-gynecology when she said, "…I've heard surgery say that about gynecologists, like, they aren't real surgeons, so they don't know what they are doing."

The statuses of the organs typically encountered in certain specialties also play into what "real medicine" is by deriving prestige or stigma from those body parts. This contributes to the internal ranking system of specialties within medicine (Abbott 1981). The less interaction doctors have with humans, especially low-status humans (women and children), the higher the physician's prestige is within Medicine as a profession. Technologically sophisticated research in medicine is sacred, and thus primary care, especially family medicine, is profane (Abbott 1981).

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Medical students, even with their high education level, seem uninformed about the gender biases and stigma that exists and the consequences that these biases have on women as group. Women are often passed up for promotions and hit a glass ceiling while men often meet a "glass escalator" (Williams 1992). This causes men and women to be segregated into different kinds of work. The long-term consequence is lower average wages for women because a disproportionate number of them are entering certain fields. (Reskin 2004).

Some of the male students interviewed felt they were treated differently on their obstetrics and gynecology rotations. However, being pushed away from obstetrics and gynecology means they are being pushed towards higher status rather than lower status specialties. One female third year student said that some attendings on certain rotations were infamous for "making things easier on girls" and not giving women as hard of a time and "keeping the expectations lower for them than for the boys." This is harmful for females who want to pursue certain higher status specialty fields. A male fourth year student commented that in obstetrics and gynecology women have better experiences and in surgery men are often "picked on more," meaning that the men receive more attention. This sets the tone that men are expected to be more ambitious and work in a specialty that is more befitting of the status of men. This is how a third year female described it:

> Yeah. I mean generally some rotations or physicians treat men and women differently. I haven't necessarily had a horrible experience because of that. Nothing I need to report. For instance, on [obstetrics and gynecology rotations], women ALWAYS have a better experience and it's not just the female doctors. I've not been on surgery yet, but I've heard a lot of stories about the guys in the class being picked on more. The girls get to slide by more easily. I think that's a disservice to both genders. I don't know which way the bias is [laughter].

Comments from a male third year student mirrored her statements when asked if he had been treated differently on some rotations versus others. He said that, "The only one is when I felt insulted. Like on [obstetrics rotation], being a guy you are treated differently."

When jobs within the profession of medicine are differentiated, they are often ranked. This has important consequences for women in the workplace. After conducting interviews, it was apparent that gender's influence might be salient, especially in discussing the socialization of medical students and how they choose medical specialties. Gender also plays into the self-selection of students into particular fields. This happens primarily with third and fourth year students when they begin assessing how they match up with the stereotypes of the specialty. This is apparently a common practice, as this third year describes it: "Everybody has been very encouraging and tell people to find what [specialty] matches them."

Many students brought up how they "fit in" with other people in the specialty, which is also gender influenced. "Fit" is socially constructed; it is not a neutral practice, meaning that it has consequences for the students. Two of the male students I interviewed were planning on going into emergency medicine. They brought up the action and energy of emergency medicine and how they liked the excitement and not always knowing what would happen. Students unintentionally allow binary notions about masculinity and femininity to influence their specialty choice. In a binary system of gender inequality, women are imputed passive, dependent, and delicate, while men, as their "opposites" are seen as active, independent, and strong. Women are thought to be emotional and men devoid of emotional responses that might impact their logical decision-making abilities. These stereotypes of masculinity then tell men that they should be strong, tough, and unemotional (Schrock and Schwalbe 2009).

Some fields of medicine contain tasks perceived as more gender "appropriate" for men. In emergency medicine, relationships with people (and especially patients) are not stressed but the ability to think quickly and act efficiently is deemed important. In these instances, emergency medicine gets coded or marked as a masculine specialty. Giving it the traits of masculinity further shows patriarchal influence over medical specialty choice. Another student brought up "the outdoors" and emergencies as "hands-on and exciting" and his worst experience centered on how, at one time, he was "the low man on the totem pole" in his last career. He liked emergency medicine because he said he "needed to feel that excitement could happen at any time." Another male student described the emergency medicine physician as "the man." "The man" is a man that has power over everyone else, including other men. To characterize a man as "the man" means that no one doubts his heterosexual masculinity and he displays the characteristics of manhood as society expects (Schrock and Shwalbe 2009). When asked what factors were important to him when choosing a specialty, a fourth year male student commented, "Umm… the people, what kind of people practice the specialty? Does everyone kind of look and sound like you or are you the oddball? So the personalities that the specialty draws." Students thus practice "homosocial reproduction" by choosing specialties where they fit the profile. Female medical students have a propensity to select fields where they see other women are well established (Bickel 2001). This data follows the patterns of past research that has shown more women in the fields of obstetrics-gynecology and pediatrics (Bickel 2001).

Specialty Lifestyle

Not only do students and physicians assign gendered characteristics to the specialties, and use it to determine their "fit," they also categorize specialties by the lifestyle they offer, which reinforces the gender segregation of specialty fields. Female students brought up their

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"biological clock" and how family concerns will influence them when choosing a specialty. Sometimes, if they did not bring it up when talking about choosing a specialty, they brought it up when asked if they thought maintaining a balance in their personal and professional lives was important. A second year female student said her biggest pressure for the future would be trying to figure out how to be a mom, a wife, and a doctor. Some women listed their husband's support in choosing a specialty as very important. In contrast, no men brought up girlfriends or wives. Women did not mention boyfriends, but two women mentioned husbands and two more women, as heterosexuals who expect to marry, implied husbands. Men seemed to treat family concerns as something they can choose to participate in or not, but for women, it is seen as a priority and abandoning it is not excusable -- as this fourth year female and male, respectively, demonstrate:

> …Yes, it's a major turn off for me. Surgery said I had no business being there because I had children. (fourth year female)

> That probably won't be an issue. Umm… you know… me being away or spending a lot of hours at work is not really a big deal. It's not anything my family isn't used to at this point. I don't think balancing that will be hard. (fourth year male)

Women must make more sacrifices to be successful in medicine because of the social expectations for women. A second year female student commented, "I think I will struggle at [maintaining balance between personal and professional demands]. My mom raised me and I'm in a career where I wont be able to be a full-time mom. That bothers me a little."

As mentioned earlier in this thesis, cultural notions that women must also be "supermoms" (Hochschild and Machung 2012) appeared to influence female medical students. Hence, family concerns for the female students were a top priority. When this second year female student was asked about the clinical pressures that she thought she would face in future practice, she brought up family pressures instead:

I think it'll be hard to figure out how to be a mom and a wife and a doctor. In a clinical setting, I don't know. I'm not concerned about being [the area's] best doctor, but I think that attitude kind of dominates the field. I want to be good, but I'm not interested in being super well known amongst everyone."

A first year female said her parents would want to "talk it over" with her if she picked a competitive specialty, because it might mean giving up being a mother. Another first year female commented that her family was not supportive of her decision to go to medical school because it was not the correct role for her. Her parents wanted grandbabies, and she was getting in the way of that happening because of her chosen career. Many were concerned about family and career expectations and a few people brought up sexism in medicine. I had one first year student go into detail in talking about the "hidden agenda" of medicine- sexism, racism, and homophobia. He said:

Have you never heard about [the hidden agenda]? [excitement]. Oh man! The hidden agenda is basically… umm… the thing in medicine is that a lot of physicians will pick on people. There's something going on that the publics not aware of. And it's very interesting to hear about it because there's a reporting system. When you, when you grade your teachers and the people you work with, like they don't know who grades them or who critiques them and uhh… Quillen at least tries to stop that by making sure the student input is done. If there's ever a clinician that you work with and you give them a low score, they wont put people with them for a while and give them a warning or whatever, so yeah, the hidden agenda. It's an interesting thing… I mean a lot of it is like sexism, racism, homophobia and things like that as well. Bullying within the medical field really. It happens everywhere.

It is the pressure to conform to the unrealistic social expectations placed on women that causes female students to worry about juggling careers, romantic relationships, and children (Hochschild and Machung 2012). Medical students are conventional in their assumptions about marriage and family, believing they should meet expected social norms even as professionals.

In talking to the female students, it is clear that there are additional pressures for women to choose specialties that permit work and family. As information on the 2013 graduating class shows, we see that some women have selected specialties where they have less on-call time.

But, many women chose obstetrics-gynecology, which usually has a substantial amount of on-call time and is considered an uncontrollable lifestyle field. In order to deal with the hours, one student explained:

> My husband and I want to have kids. In [obstetrics], [some physicians] join practices and you don't deliver your own patients; you only deliver the night you are on call. But being on call all the time leads to physician burnout. A lot of physicians go to part time and part time is 50-60 hours [per week].

As a result of their unquestioned assumptions about their future roles, some female students worry that their career might negatively impact their ability to effectively raise children. As one female relates that she would put family first, over her career: "Just whatever makes me happy. I think if I decided to do neurosurgery, they [future family] may say, ya know, we'd rather you spend time with us, but they don't have to worry about that because I don't want to spend all my time doing medicine."

Less family pressures are placed on men, because as long as they are heterosexual, it is assumed that they will have wives who can assume more of the responsibility in taking care of children. Male students appeared much less worried about family expectations, as this second year tells us when asked if other people in his life might care about what specialty he chooses. He replied, "Oh yeah. My fiancé. She is worried about me and being able to have time to spend with her and our family and she's already talking about it." I then asked if that was influencing what he was thinking about choosing as a specialty and he replied, "Well, I mean, no, not really. I'll manage fine and I think she understands that."

Another second year female was at odds with the thoughts of her inability to manage a career and have a family, even though she sees this as a priority.

> …I am focused on being the best mom and I am afraid I will overcompensate ya know what I mean? I'm afraid I'll try to make up for what I didn't have. How are we supposed

to have babies and manage our career? … [laughter] There's no way I could have children now. Like be in charge of another human!

A third year female, when asked what factors would matter the most to her in choosing a specialty, brought up family expectations as well when she commented, "lifestyle in the sense of what we were just talking about -- will I be able to go to the soccer games? Money will factor into it a little as well. I'll pick something I like though overall."

As the female students' remarks indicate, women are expected to not only be mothers but thought that they should practice "intensive mothering" (Hays 1996). Hays explained the contradictions that working mothers face. They are given conflicting ideas about their time and energy and also how they should behave. To succeed in motherhood, they need to be nurturing and unselfish, but for success at work, they need to be competitive and ambitious. Since more women are working, it would be logical to think that fewer demands would be placed on motherhood, but this is not the case. Instead of motherhood being simpler, an expectation of "intensive mothering" has developed. This ideology even dictates that mothering should be expert-guided, emotionally absorbing, labor-intensive, and expensive. We have placed unrealistic commitments on mothering that conflict with all of women's other obligations (Hays 1996). This ideology means that the mother is still primarily responsible for child rearing, as was the case in the female students I interviewed.

Overall, for women, specialty choice seemed to be affected by the type of work they would be performing and the time that would leave for family obligations. For men, the most important concerns were the type of work they would be performing and the lifestyle they would have. This third year female was very aware of choosing a specialty that would permit family when she said, "That's one of my top priorities [balancing personal and professional demands].

It's huge to me. It was huge in my career choice as well. I didn't want something that would keep me from family."

The concerns that male students have may seem overlapping, as "lifestyle" may permit a man to have close contact with his family, but it is still seen as optional for men and required for women. Lifestyle, for male students, was a matter of how much time they get to spend outdoors, with friends and family, or engaging in other outside interests. A third year female spoke about her struggles with juggling family and career that led her to enter medical school after her child grew up:

> It is important. I did not feel… when I was raising my son, I was doing it by myself, and I did not feel like I could do school and raise him and do a good job at both … I think people who are raising their family have to have really good family support or they have to be able to hire really good support and I didn't have good family support at all so I don't think that people can do it all by themselves.

The common denominator in all of the students' comments was the expectations of little or no support from their male partners. Women are trained to think that they can have it all -- a career, a husband and still be a full time mom. This is nearly impossible as these roles often clash. A fourth year female discusses the sacrifices women make when entering the profession:

> Yeah, I know it sounds bad, but it's just part of it. You'll know soon.* [laughter] I mean, you know, you sacrifice in undergrad, but it's taken to a whole new level in med school, and I'm sure it will be even harder in residency. Especially as a female, you sacrifice, I think.

I followed up with another question asking what she meant when she said that females sacrifice:

> Well, they don't think about it the same way [males and females]. Its part of it to [women] for sure [family concerns], but I don't know if [males] are expected to do more than [school and career]. For us, I mean, we are supposed to do all these other things too. Like family and stuff.

Another third year female student shared that she worried about struggling in managing the expectations placed on her as a woman and she spoke about it when asked if she was concerned about balancing professional and personal demands:

> Yeah. I am concerned about it. I think it's gonna be tough. Its gonna be hard. Uhh, I guess I'll see what the future holds. I have to devote myself to medicine, I know that, but I want to see my friends and my family. Maybe have one of my own so I think it will be hard to do that. To balance my patients, who I have to be there for, with my family, who I should be there for [laughter]. What can you do?

Overall, women in medicine, just like in other professions, are socialized to think they should be able to manage a career and still have it all. These are unrealistic expectations that are not placed on men. This clearly influences women and men when they are choosing specialties, which was previously discussed. Binary gender roles that are upheld by people in society more generally also exert a powerful influence on students, in that they reinforce the gender order (by gender inequality).

CHAPTER 6

CONCLUSION AND DISCUSSION

As medical students study the science of the human body, they observe how physicians interact with others and learn what will be expected of them once they join their ranks. They grow familiar with the culture of medicine, including the symbols, language, and norms of the profession. More than 50 years ago, Becker and colleagues found that most medical students begin school with idealistic notions about helping people. By the time they graduate, however, they become emotionally detached, cynical, conservative, and reductionistic in their approach to patients' bodies and the medicine they practice (Becker et al. 1961). The students I interviewed—despite their demographic variation from the white, male, upper-class norm of the 1960s—mirror their predecessors by focusing their energy on technology and procedures and showing less interest in seeing the patient as a whole (see Becker et al. 1961; see also Bickel 2001).

This long-standing cynicism caused me to question the training that students receive in medical school and the effects of traditional student socialization on choosing a specialty. From my interviews with students, it seems as though this professionalization process steers students away from primary care fields because the inequalities embedded in normative depictions of medical specialties are reinforced during the students' formative years.

As students learn how to be doctors, they also learn through overt and covert messages about the inequality within medicine: the hierarchy and ranking of people and different specialties. The medical students reinforce the negative stereotypes in how they described what they view to be typical primary care practitioners. In other words, the high status of physicians and the lower status of primary care create a conflict in understanding what the students can

expect from their future careers. In fields like family medicine, compassion and care about the patient's socioeconomic status and environment is important, but overall, the job is lower status because less "real science" is taking place. Students generally seem to accept and reinforce stereotypes about the medical subfields that put primary care below the other specialties (except psychiatry).

Students who are attracted to the fundamental doctor-patient relationship may be deterred by health insurance business practices, corporate control, and bureaucratic paperwork and see those factors as interfering with what they might enjoy about primary care and undermining their professional discretion in medical practice. Therefore, the primary care physician shortage problem is a status problem that goes to the core of what it means to be a professional. The stratification of medical subfields magnifies inequalities and gives the impression that the students who choose primary care do so because they lack the choice to do something "better" and that those who enter surgery and subspecialties are smarter and deserve more pay. The stereotypes of these fields may mean that addressing the primary care doctor shortage will not be solved by attempts to graduate more physicians and create more residency positions. The effectiveness of these recommendations and of government programs alone may be insufficient to overcome the problems that reinforce anti-primary care stereotypes.

The stereotyping of certain fields also contributes to women being steered towards lower status jobs that involve more interaction with people and with less control over their time. In specialties where women are still underrepresented, traditional training techniques like "pimping" may shape women's decisions about career specialization and reinforce the gender bias in medicine. When women encounter bias and are judged as incompetent in comparison to men—by both faculty and mentors—they may be more likely to choose specialties where they

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see women already established and successful. This assures them that they will have the mentoring that is necessary in a long-term career. Conversely, it seems as though men are being groomed for certain high status specialty fields. This can occur when medical professionals mentor men in the form of "pimping," which steers men away from lower status professions and creates a "gender order" that is reinforced through stereotypes and ranking. Pimping then, as the language suggests, can be a barrier to women because of judgments about their competence and ability compared to men.

Along with traditional "pimping" behaviors, women meet other unintended barriers when pursuing science-related careers. Male and female faculty and advisors have been found to hold gender biases that favor males (Racusin et al. 2012), which impede women's progress in science careers. Not only do sexist practices keep bright young women from excelling in science, they can discourage women from science completely (Pollack 2013). Recognizing this bias and formulating non-sexist academic policies could contribute to reducing gender disparities and positively affect women's career ambitions.

Furthermore, cultural notions that women must be "supermoms" (Hochschild and Machung 2012) influence female medical students' career choices. As a society, we have unrealistic goals related to mothering that conflict with all of women's other obligations (Hays 1996). This ideology means that the mother is still held primarily responsible for child rearing and devotion to family. With the female students I interviewed, it became clear that they are receiving paradoxical messages. On the one hand, as future physicians, they should be dedicated to their patient population and keep up with the scientific advancements in medicine. On the other hand, they should, like women in other professions, be the "best moms" they can be. These unrealistic notions caused some of the female students that I interviewed to say that they

were not concerned about receiving recognition for being the "best doctor" because they also expect to take care of their families. These views can be harmful to women as a group who are trying to succeed in professional careers.

The unintended harms of patriarchy, the ranking of certain specialties, and the devaluation of women's work all serve to influence the specialty choice of medical students. The logical outcomes of unintentional inequalities from sexism, the stereotypes of different fields, and the ranking of specialties produce an increasing pay gap between male and female physicians, which has been noted in previous studies. These conditions result in an abundance of women in some specialties and an underrepresentation of women in others (i.e. surgery and emergency medicine). In other words, if students continue with their current notions and plans, we can expect to see gender segregation continue in medicine that will be linked to major differences in salaries with unequal compensation depending on the specialty.

Overall, there is a great need to combat the stereotypes of certain specialty fields, redesign medical training, educate faculty about the harms of their gender biases, and to direct women to pursue the careers they want to have, not what they think "fits" them because it is gender appropriate. For women, stereotypes about gender appropriate careers work against their best interest because it impedes their full participation in science, their income earning potential, and enjoyment in their careers. If enough women get their foot in the door in what are currently seen as male subspecialties, more women will be inspired to follow their lead, such that those specialties will become gender-integrated.

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APPENDIX

Interview Questions

Class rank: M1   M2   M3   M4

Gender: Male Female

Age: _____

Marital Status: Single   Married   Divorced/Separated   Widowed   Other

Children: Yes   No   Number of Children: _____   Ages of Children: _____

How do you classify your ethnic background? Please circle only one.
 1. White: American Born   6. Hispanic: Puerto Rican
 2. White: Other   7. Hispanic: Mexican
 3. Black: African American   8. Hispanic: Other _____
 4. Black: African descent   Other: _____ 9. Native American or Alaskan Native
 5. Asian or Pacific Islander   10. Other: _____

Mother's occupation
_____

Father's occupation
_____

M1, M2, M3, M4: Where did you grow up? What kind of town was it? Rural or urban? If rural, what does that mean to you?

M1, M2, M3, M4: Did you feel that it was important to express an interest in family practice here at QCOM? What did you initially think/feel about that? Has that feeling changed at all for you?

M1, M2, M3, M4: Describe your ideal setting for a practice location? Both the area and the actual practice itself. (Examples include private practice- solo or small group, large single or multi-specialty groups, academic groups, etc.)

M1, M2, M3, M4: During clinical training, what has been the best experience that you've had so far? What has been your worst experience?

M1 and M2: During your undergrad career, what medical specialty did you receive the most exposure to? The least exposure? What were your main interests in medicine back then? How about now?

M3 and M4: What specialties have you chosen to spend the most time in so far? What were your main interests as a first year student? What about now?

M1, M2, M3: Medical school debt, on average, is over 160,000 for graduates of allopathic medical schools. Do you think student debt will be a contributor when choosing a specialty?
M4: Was student debt a contributor in choosing a particular specialty?

Passing the first part of the medical licensing exam, or Step 1, is essential for future medical practice.
M1, M2: How do you plan to prepare for the exam?
M3, M4: How did you prepare for the exam? How prepared did you feel before taking the exam?

M1, M2, M3, M4: Do feel that step scores can influence residency choice?
M3: Will your step score possibly influence your residency choice?
M4: Did your step scores influence your residency choice? If you had scored higher or lower, would you have picked something else?

M1, M2, M3 and M4: While you've studied medicine, do you feel that you have been able to maintain your personal wellness? Has lack of sleep affected you?
M4: Have the stresses of medical school changed how you view some specialties?

M1, M2, M3, M4: Most positive mentoring relationships with a physician they have had so far? What specialty did she/he practice? Worst experience and specialty?

M1, M2, M3, M4: What kinds of pressures do you think you may face in clinical practice?

M1, M2, M3, M4: How do you think you will be able to balance personal/family and professional demands? Have you ever thought about this? How important is it to you?

M1, M2, M3: Please tell me what factors will matter the most to you in selecting a specialty.
M4: Please tell me what factors mattered the most to you in selecting a specialty.

M1, M2, M3: Are there other people in your life that might care about what residency you choose?
M4: Were there other people in your life that cared about what residency you chose? Did they influence your choice?

M1, M2, M3, M4: When you talk to faculty about medical specialties, what kinds of things do they say?

M1, M2, M3, M4: Sometimes clinics lack technology or medical equipment that could be used to improve service to patients to patients. Have you ever witnessed this? What types of specialists practiced there? Did this influence your feelings about the clinicians?

M1, M2, M3, M4: How do you feel about nurse practitioners and physicians assistants taking a larger role in the arena of primary care?

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M1, M2, M3, M4: Sum up your ideal job description.

M1, M2, M3, M4: Have you had experiences with physicians where you felt that they suffered from exhaustion? How did this influence you?

M1, M2, M3, M4: If you could foresee yourself in practice, what types of situations do you think would cause you the most frustration? The most joy?

M1, M2, M3, M4: What other issues are you concerned about in becoming a practicing physician?

M1, M2, M3: Have you ever heard some specialists "bad-mouth" others? How did you feel about this?
M4: Has anyone ever "bad-mouthed" you for your decision to practice_____?

M1, M2, M3, M4: Do you think you were treated differently in some specialty rotations versus others? How? How did that make you feel? How did you view the rotation after that?

M1, M2, M3, M4: How would you describe what you view to be a "typical" family physician? How about an internist? A surgeon? (In terms of personality, attitudes, etc.)

M4: When did you know what specialty you would choose?

VITA

CASEY L. LAWSON

Personal Data:	Date of Birth: August 27, 1982
	Place of Birth: Morristown, Tennessee
Education:	Public Schools, Rogersville, TN
	B.S. Sociology, East Tennessee State University, Johnson City, Tennessee 2012
	M.A. Sociology, East Tennessee State University, Johnson City, Tennessee 2013
Experience:	President, American Medical Student Association, ETSU Pre-med Chapter, 2012-2013
	Teaching Assistant, East Tennessee State University, Department of Sociology, 2012-2013
Research:	Research Assistant, Department of Public Health ETSU 2010-2012
	Poster Presentation, Appalachian Student Research Forum, "Maternal Tanning Influences Daughters' Perceived Attractiveness and Intentions to Tan" ETSU 2012
Honors and Awards:	Dorman G. Stout Award, Outstanding Sociology Student, East Tennessee State University, 2012