Differences in patient satisfaction between osteopathic and allopathic physicians

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Thesis

DIFFERENCES IN PATIENT SATISFACTION BETWEEN OSTEOPATHIC AND ALLOPATHIC PHYSICIANS

by

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B.S., Syracuse University, 2013

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I would also like to thank my family for their dedication, love, and support throughout the years. Without them I would not be where I am today.
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GEORGE A. DEMOSTHENES

ABSTRACT

The two types of physicians in the United States healthcare system differ based on the type of medical education they receive. The first type train at allopathic medical schools and upon completion, students are awarded their Doctorate of Medicine and are then known as MDs. The second, less known type of medical education is that of osteopathy. Students that go to osteopathic medical schools earn a degree of Doctor of Osteopathic Medicine, and are thus considered DOs.

This literature review analyzed public satisfaction with MDs or DOs since there are fundamental differences in the core philosophies of the two. It also answers whether this translates into better clinical outcomes and a more positive prognosis for the patient.

The purpose of this study was to find any noticeable differences that translated into actual practice and discuss the implications they may have for the future of healthcare. Although no conclusion could be made, based on findings discussed throughout this paper, one may speculate that patients are more satisfied with a DO as opposed to an MD. Furthermore, as a patients’ satisfaction is indicative of their health related quality of life, it is possible that patients that visit DO physicians would most likely have a better health related quality of life.
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LIST OF ABBREVIATIONS

AAMC..........................................................American Association of Medical Colleges
CHD..........................................................Coronary Heart Disease
DO..........................................................Doctor of Osteopathic Medicine
HRQOL.........................................................Health Related Quality of Life
MD..........................................................Medical Doctor
MI............................................................Myocardial Infarction
OMM..........................................................Osteopathic Manipulative Medicine
US...........................................................United States
INTRODUCTION

In the United States healthcare system today, there are two main types of medical doctors, allopathic physicians, the traditional MD’s, and osteopathic physicians (DO’s). Both are fully licensed physicians, trained in diagnosing and treating ailments and disorders, surgery, and providing preventative care. Most foreign countries recognize allopathic physicians, whereas osteopathic physicians continue to gain recognition outside of the United States ("Allopathic and Osteopathic Medicine - Cellular and Molecular Biology Undergraduate Program - Biomedical Sciences - Missouri State University", n.d.). Osteopathic medicine began as a nineteenth century health reform movement that emphasized preventive care and allowing the body to heal without overuse of medications. In 1874, many popular medicines being used were toxic. An MD named Andrew Taylor Still was concerned about overuse of these medications, and founded a new school of medicine that emphasized preventive care and the integration of the body's systems, the idea that together, the separate organ systems combine to make a highly functioning and complex individual (Two Kinds of Physicians - Health Professions and Prelaw Center - Indiana University - University Division, n.d.).

Although there are some core differences in the founding principles between the two type of schools, the students that graduate from osteopathic schools fulfill the same requirements as their MD counterparts as well as complete additional training in Osteopathic Manipulative Medicine (OMM) (About Osteopathic Medicine, n.d.). The differences lie in the theories that DOs are trained to look at the whole person from their first days of medical school, which means they see each person as more than just a
collection of organ systems and body parts that may become injured or diseased (About Osteopathic Medicine, n.d.). This holistic approach leads DOs to be well versed in the body’s self-regulatory and self-healing mechanisms, that with the close integration of OMM, allows them to ease the body in the right direction to heal optimally (often times without the use of prescription drugs) (How to Decide Between an M.D. and a D.O. - US News, n.d.).

Not all Doctors of Osteopathic Medicine practice solely OMM though, most tend to be primary care physicians, and others go on to specialize as their MD counterparts do. They are thereby indistinguishable from MDs most of the time and sometimes the patients may not even know it (Brotherton et al., 2005). About 50% of all DOs tend to be primary care physicians though, and most tend to practice in medically underserved or socioeconomically disadvantaged areas (Lawhorne et al., 1993). Additionally there is an emphasis among DOs to have a close relationship with the patient, and to focus their effort on preventative care (Carey et al.).

In the United States, recent updates to healthcare laws have created a change in the way many facets of the healthcare system operate. For one, the implementation of the Affordable Health Care Act, or Obamacare as it has been popularized, insured an additional thirty-two million Americans, but simple supply and demand relationships were consequently shifted and the U.S now faces a physician shortage. It is projected that in about ten years, the U.S will face a shortage of more than ninety thousand doctors, forty five thousand of which will be primary care physicians and the other half medical
specialists and surgeons as projected in Figure 1.

(physician_shortages_to_worsen_without_increases_in_residency_tr.pdf, n.d.).

In an attempt to offset this, the numbers of medical schools have increased, and current medical schools increased enrollment (Figures 2 & 3). What hasn’t changed though, are federally funded residency training programs. Medical schools can accept increased numbers of applicants and have more students graduating and passing the boards, but if there are not residency programs for them to matriculate into during their post graduate years, they cannot complete their formal training and are thus not contributing to an increased physician workforce. The reason for this is a cap for federally funded residency training programs that was instituted back in 1997 by the Balanced Budget Act by congress

(physician_shortages_to_worsen_without_increases_in_residency_tr.pdf, n.d.).

Figure 1: Physician Supply and Demand Projections: 2008-2020
Beginning in 2008 and extending through 2020 future projections it can be seen that the demand for physicians (of all specialties) will not be able to keep up with the supply. By 2020 it is projected that there will be a shortage of 91,500 physicians. (Taken from AAMC)
From 2000 to 2011 the amount of students admitted and matriculating into U.S. Allopathic medical schools has increased, as has the number of Allopathic medical school applicants. (Applicants have increased at a greater rate than those admitted). (Figure taken from AAMC)
The AAMC is doing its best to make sure congress does their part by lifting the cap, and assuming they do, medical schools need to continue to churn out medical graduates, both MD and DO. And assuming the projections are accurate, fifty percent of them will need to fulfill the primary care projected shortage. This is a significant opportunity for the rapidly growing osteopathic profession (Figure 4).

Over the past one hundred years as osteopathy has become more popular, many of the traditional osteopathic hospitals have been dissolved and have merged with allopathic hospitals. This in turn created a shift that made it harder for DOs to enter a traditional osteopathic residency, and therefore inadvertently pushed them into primary care specialties. Osteopathic faculty subsequently were recruited into allopathic residency

Figure 3: Total Enrollment In, and Number of Osteopathic Medical Schools
The numbers of Osteopathic Medical Schools have increased steadily and quickly from 1968 to present day. The number of enrolled students has additionally increased an average of about one thousand per year since 2003. (Taken from TouroCOM)
programs, which highlighted the need for cooperation between the two types of physicians (Morzinski & Henley, 2006).

![Graph showing the increase in the number of Osteopathic Physicians since 1935](image)

**Figure 4: Increase In The Number of Osteopathic Physicians Since 1935**

From 1935 to the mid 1970’s there was a slow but steady increase in the number of Osteopathic Physicians practicing in the U.S. Beginning in 1980 to present, there has been an exponential increase in the number of Osteopathic physicians in the U.S. (Table Taken From TouroCOM)
MEDICAL STUDENTS

In 2006 there were 56,851 practicing DOs nationally, sixty percent of which were in family or general medicine, internal medicine, or pediatrics. An examination of data done by two researchers, Licciardone, and Sigh, focused on compiling data from the National Ambulatory Medical Care Survey in an attempt to analyze the sociodemographic and geographic characteristics associated with patient visits to osteopathic physicians for primary care (Licciardone, 2007). Their results found that Osteopathic physicians provided 10% of the primary care visits across the United States. Relative to the small number of practicing DOs, this number is significant (Licciardone & Singh, 2011).

The cause of this disproportionate distribution may be the levels of encouragement to enter primary care specialties by medical school faculty. A study done in 1999 by Peters et al. attempted to contrast the behaviors and attitudes relative to primary care education in osteopathic and allopathic medical schools (Peters et.al.). They acknowledged that medical education in osteopathic and allopathic schools was different in major ways. The mission, curriculum, faculty composition, research programs and the types of students the medical schools admitted vary between the two. Furthermore the goal of all osteopathic schools is to produce primary care physicians and the major academic department is family medicine. In contrast, relatively few allopathic schools state primary care as their main objective. Although most allopathic medical schools have departments of family medicine, family physicians rarely enjoy the acclaim given to members of other specialty departments (Peters et al., 1999b).
Moreover, osteopathic education requires primary care experiences and utilizes voluntary primary care faculty and community-based institutions as opposed to academic teaching hospitals as training sites. This exposes students repeatedly to the values, attitudes, and practice of primary care. Osteopathic medical schools tend to admit students with characteristics associated with the choice of primary care careers. Many osteopathic students thereby demonstrate attitudes favorable to careers in primary care, ranking “people orientation” high and “technical orientation” low. Additionally a relatively high proportion of students come from rural communities or inner cities. Students from such communities are more likely to choose primary care careers. The climate for primary care training in allopathic schools has been described as “chilly” since students from allopathic medical schools tend to view specialty areas more favorable (Peters et al., 1999b).

By analyzing a 2502 person sample of osteopathic and allopathic first year, fourth year, post graduate year two, clinical faculty, and medical school deans, in a twenty-minute telephone interview, the authors of the study addressed five major topics. (1) If the personal characteristics of individuals in the osteopathic and allopathic communities differ. (2) If reasons for entering medicine differ between osteopathic and allopathic first-year students. (3) If osteopathic and allopathic students’ and residents’ primary care have different educational experiences. (4) If community supports for primary care differ. (5) If attitudes toward the competence of primary care physicians differ between the two communities. In addition, the study asked whether responses differed by academic status and primary care orientation within communities. (Peters et al.,1999b). The specific
questions asked to get information about the above general issues are outlined in Table 1 below.

The results were as follows: Demographically both allopathic and osteopathic students had similar composition of the two genders, but there was a greater proportion of nonwhites in allopathic practice, and a greater proportion of practitioners from rural communities in the osteopathic practice. Among these individuals almost 39% of osteopathic professionals practiced or planned to practice primary care compared to 19% of the allopathic doctors. Additionally almost 64% of the osteopaths described themselves as socioemotionally oriented compared to 40% of allopathic. Conversely though, the reasons for entering medicine presented no statistical difference between the two types of doctors. Collectively these four facets combine to assess whether or not there is a difference in the personal characteristics between the two professionals and whether their reasons for entering primary care differed. From the data, the authors of the study concluded that there was indeed a difference in their personal characteristics, the DO’s being more socioemotionally oriented, but both identified similar reasons for entering medicine (Peters et al., 1999b).

The next set of measurements was indicative of the doctors’ primary care educational experience. That is their exposure to primary care, satisfaction with their training, and their role models. Osteopaths spent 20% more time in primary care settings and with primary care faculty than allopaths, and overall osteopaths reported greater satisfaction in primary care training than allopaths, while allopaths reported greater satisfaction in specialty training (Peters et al., 1999b).
<table>
<thead>
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<th>Measure</th>
<th>Indicators Relative to Primary Care Culture</th>
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<tbody>
<tr>
<td>Personal characteristics</td>
<td></td>
</tr>
</tbody>
</table>
A. Demographics | Learners identify their gender, race, size of hometown\(^a\) |
B. Specialty | Respondents identify their specialty orientation\(^b\) |
C. Sociocultural orientation | Respondents identify themselves as being sociocultural oriented\(^c\) |
D. Reasons for entering medicine | First-year students rate importance of intellectual challenge, helping people, research, independence, social responsibility, job security, income, status, and autonomy in choosing a career in medicine\(^d\) |
| Primary care educational experiences | 
E. Exposure to primary care | Learners identify percent of time spent in primary care settings\(^e\) |
| | Learners identify percent of time with primary care faculty\(^f\) |
F. Satisfaction with training | Learners are satisfied with the quality of primary care/specialty education\(^g\) |
G. Role models | Learners identify a primary care physician as their role model\(^h\) |
| Community support for primary care | 
H. Institutional mission | Deans identify training primary care physicians as an important school mission\(^i\) |
I. Encouragement to enter primary care | Learners report being encouraged to enter primary care by faculty, peers, or residents\(^j\) |
| Attitudes toward primary care physicians' clinical and academic competence | 
J. Endorsement of primary care physician as best physician to treat less serious medical conditions | Respondents identify primary care physician as most appropriate doctor for both a 62 year-old man with back pain and an 8 year-old boy with asthma\(^k\) |
K. Endorsement of primary care physician as best physician to treat more serious medical conditions | Respondents identify primary care physician as most appropriate doctor for both a 45 year-old woman with ulcerative colitis and a long-standing relationship with her primary care physician and a 55 year-old woman with skin rash, joint pain, fever and fatigue\(^l\) |
L. Global perceptions of competence of primary care physicians | Respondents agree that primary care doctors must tolerate more uncertainty as well as disagree that compensation should be greater for technical than cognitive tests and specialists are as competent as generalists in providing primary care\(^m\) |
M. Rating primary care tasks as requiring a high degree of expertise | Respondents rate degree of expertise required to both manage depression and achieve patient compliance high\(^n\) |
N. Perceived quality of primary care teaching | Respondents rate the quality of primary care teaching as good as or better than other fields\(^o\) |
O. Perceived quality of primary care research | Respondents rate the quality of primary care research as good as or better than other fields\(^p\) |
P. Perceived attitudes of specialists toward primary care | Learners report that specialists display mostly positive attitudes towards primary care physicians\(^q\) |

\(^a\) Students and residents identified their hometown as rural, a town (2,000–10,000), small city (10,000–50,000), moderate city (50,000–500,000), suburb, or large city (>500,000).

\(^b\) Faculty identified the specialty in which they practiced and the proportion of time practicing primary care, learners identified their intended specialty.

\(^c\) Respondents were asked to choose an orientation: sociocultural or technoscientific.

\(^d\) Respondents were asked to rate factors as very important, somewhat important, or not important during current clinical training (medical education or residency).

\(^e\) Respondents were asked to estimate percentage of time in their current clinical training they spent with a primary care faculty and in primary care settings.

\(^f\) Respondents rated their satisfaction with training for primary care and specialist practice as very satisfied, somewhat satisfied, somewhat dissatisfied, and very dissatisfied.

\(^g\) Respondents were asked to identify the medical field in which their principal role model worked.

\(^h\) Respondents were asked whether training primary care physicians or specialists was a more important mission at their school.

\(^i\) Respondents were asked if they were encouraged: strongly toward specialties, somewhat toward specialties, strongly toward primary care, somewhat toward primary care, or neither.

\(^j\) Respondents were asked if they were encouraged to enter primary care, specialties, or neither.

\(^k\) Respondents were asked if they strongly encouraged students toward primary care careers, somewhat encouraged them toward primary care, somewhat encouraged them toward specialty careers, or strongly encouraged them toward specialties.

\(^l\) Respondents were asked to identify best doctor to treat prototypal patients.

\(^m\) Respondents were asked if they agreed or disagreed with the statements.

\(^n\) Respondents rated the degree of expertise required as being: high, medium, or low.

\(^o\) Respondents rate quality as being: better, same, or worse than other specialties.

\(^p\) Respondents rated perceived attitudes as mostly positive, neutral, mostly negative.
In order to assess the influence of community support for primary care, deans of medical schools were asked to identify training time in primary care as a school mission and students were asked to report their level of encouragement for entering primary care. All osteopathic deans (100%) reported that training future primary care physicians was the most important factor to their institutions while only about half of the allopathic deans reported the same mission. Additionally osteopathic learners reported more encouragement in entering primary care than their allopathic counterparts did, and 40% more osteopathic than allopathic faculty reported encouraging their students themselves (Peters et al., 1999b).

The last two qualities that were used to compare the two physicians’ were attitudes toward primary care physicians’ clinical competence, and attitudes toward the academic competence of primary care physicians. To address the first, respondents were asked to identify how appropriate a primary care physician would be to treat a condition such as back pain or childhood asthma, and also how appropriate one would be to treat serious illnesses. 75% of all respondents agreed that a primary care physician would be most appropriate. Additionally less than half of osteopaths and allopaths endorsed a primary care doctor to treat serious illnesses. Less than 25% of both believed that primary care tasks require a high degree of expertise (Peters et al., 1999b).

To address the latter, that is the academic competence of primary care physicians, respondents rated the quality of primary care teaching, primary care research, and

Table 1: Measures of Cultural Characteristics Relative to Primary Care
The study that this table was taken from (Peters et al.) used each grouping of indicators to deduce if the measurements (left hand column) were significant in analyzing the physicians in this study.
attitudes of specialists towards primary care. Roughly 80% of MDs and DOs reported that primary care faculty members taught as well or better than specialist faculty. 7% fewer osteopaths than allopaths rated primary care research equal or the same to that of specialists. Lastly, there were no differences between the groups in attitudes of specialists toward primary care physicians among specialist faculty (Peters et al., 1999b).

From this study, it can be deduced that the culture for osteopathic medical schools support primary care careers, which is not necessarily due to the higher proportion of primary care, oriented faculty. It is resultant to the fact that osteopathic medical schools admit applicants whose personal characteristics and interests fit well with primary care culture and are therefore more likely to choose primary care careers.

The study then goes on to postulate that even though there are differences in the two communities, they are becoming less and less different and in the future, the interests and ideals of both osteopathic physicians and students will converge with that of the allopathic practitioner (Peters et al., 1999b).

These findings are expanded upon in a study by Carey, Motyka, Garrett, and Kelller (2003). They went a little further and attempted to analyze not only the reason for entering primary care, or the type of people that are more apt to practice primary care, but to attempt to decipher if there is a difference between the way the two types of physicians interacted with patients once they were already practicing.

The authors examined whether osteopathic primary care physicians’ interactions with patients reflected the principles of osteopathic medicine. Patients’ visits were recorded and analyzed by two reviewers, who, based on certain pre-specified criteria,
were required to make a judgment on what type of doctor the attending physician was. Fifty-four patients visited eleven osteopathic and seven allopathic primary care physicians in Maine for screening physicals, headache, lower back pain, and hypertension. Twenty-three of the twenty-six measured items were used more frequently by osteopathic physicians than allopathic doctors. To name a few, osteopathic physicians were more likely to use patients’ first names, discuss social, familial, and emotional impact of illnesses, and discuss other health issues not related to the reason for the visit (Carey et al., 2003). The results are shown below in Table 2 below. It is evident that there were noticeable differences between the two types of doctors speaking to how they carried themselves conversationally and how they treated their patients. The communication styles of the osteopathic physicians were derived from the theoretical basis of osteopathic principles and distinguish them from allopathic physicians (Peters et al., 1999b). This may be due to the fact that osteopathic students demonstrate attitudes favorable to careers in primary care, ranking ‘people orientation’ high and ‘technical orientation’ low (Peters, Clark-Chiarelli, & Block, 1999a). The limitation to this study is that it was done in Maine where most of the osteopathic physicians graduated from the same medical college and had similar training.

Based on the current literature, it is evident that there is a noticeable difference between the two types of physicians. A recorder who is specifically trained to be looking for certain traits that may differentiate the two, is successful in doing so, but the question still remains if the way that the average DO or MD conduct themselves is noticeable to the public.
<table>
<thead>
<tr>
<th></th>
<th>Visits to Osteopathic Physicians (N = 32)</th>
<th>Visits to Allopathic Physicians (N = 22)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discuss preventive measures specific to the complaint (N = 41)</td>
<td>79</td>
<td>47</td>
<td>.03</td>
</tr>
<tr>
<td>Discuss general/unrelated health measures</td>
<td>88</td>
<td>73</td>
<td></td>
</tr>
<tr>
<td>Discuss family/social issues unrelated to health</td>
<td>66</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Discuss health issues in relation to family life</td>
<td>56</td>
<td>32</td>
<td>.01</td>
</tr>
<tr>
<td>Discuss health issues in relation to social activities</td>
<td>38</td>
<td>14</td>
<td>.05</td>
</tr>
<tr>
<td>Discuss health issues in relation to work</td>
<td>53</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Discuss patient's emotional state</td>
<td>66</td>
<td>32</td>
<td>.02</td>
</tr>
<tr>
<td>Physician uses patient's first name</td>
<td>31</td>
<td>9</td>
<td>.05</td>
</tr>
<tr>
<td>Patient uses physician's first name</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Physician discusses his or her personal experience, not including professional experience with other patients</td>
<td>28</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Touches patient but not during examination</td>
<td>3</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Review of systems includes unrelated areas (N = 41)</td>
<td>71</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>Examination includes unrelated areas (N = 41)</td>
<td>54</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Asks “Anything else I can do for you?” or equivalent</td>
<td>19</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Asks “Do you have any questions?” or equivalent</td>
<td>38</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Prescribes no medications (including over-the-counter medications)</td>
<td>38</td>
<td>14</td>
<td></td>
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<tr>
<td>Recommends herb/nutritional/physical or other non-drug alternative medications, not including osteopathic manipulative treatment</td>
<td>38</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Discusses what patient can do to improve own condition</td>
<td>69</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>Physician discusses body’s self-healing ability or reassures that condition will improve on its own</td>
<td>19</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Physician discusses musculoskeletal cause or consequence related to patient’s condition</td>
<td>63</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>History included musculoskeletal review of systems</td>
<td>66</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Discussion of literature or scientific basis of treatment</td>
<td>9</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Inquires about alternative modes of therapy patient may have used</td>
<td>25</td>
<td>14</td>
<td></td>
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<tr>
<td>Asks for patient’s opinion on cause of problem</td>
<td>19</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Asks for patient’s opinion about treatment</td>
<td>13</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Explains cause of problem or reasoning behind treatment</td>
<td>50</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Mean total of ‘yes’ responses (total = 26)</td>
<td>11</td>
<td>6.9</td>
<td>.01</td>
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</table>
An interesting aspect of osteopathic care is that there is a general misinformed or uninformed perception of these physicians. There has been considerable debate about the professional identity and distinctiveness of DOs in the United States (Licciardone & Singh, 2011). There is a disproportionate awareness of DOs between young and old adults, the young being much less aware. Furthermore in addition to young adults, members of racial and ethnic minority groups and persons with no more than a high school education are less likely to be aware of DOs, even after adjusting for United States Census region and urbanization of residence. Surprisingly, among persons claiming to be aware of DOs, members of racial and ethnic minority groups continue to underutilize DOs (Licciardone & Singh, 2011). These racial and ethnic findings may be partially explained by the underrepresentation of Blacks and Hispanics among students at colleges of osteopathic medicine compared to allopathic medical schools (8% of osteopathic matriculants vs. 14% of allopathic matriculants in 2004). National surveys indicate that less than half of the public is aware of DOs (Licciardone & Singh, 2011).
SATISFACTION

If more than half of the public is unaware of Doctors of Osteopathic Medicine as a profession, and don’t know that there are two types of physicians practicing in American health care at the present time, it is necessary to compare the two. It may be possible that the public is generally more satisfied with DOs than MDs or vice versa due to there being philosophical differences in their educations. This could translate to better clinical outcomes and thus a more positive prognosis for the patient.

Firstly, exactly what patients expect out of their physicians must be analyzed, as satisfaction is the basis of what is expected. From past self-experiences, and from talking to others, what most expect out of their physician is actually quite simple. When going in for routine well visits, one expects to learn of any impending illnesses that they are at risk due to lifestyle choices or genetic predispositions, they expect the doctor to ask questions, and routine examinations to be performed. If one is sick, hurt, or has any other ailment, they expect to be diagnosed, informed, treated, and given an expectation as to their future condition or prognosis. More specifically, and more obviously, they expect their physician to listen to what they have to say and for him/her to be honest, thoughtful, and caring as if they were the only patients of the day.

Something more may be expected out of DO primary care physicians. This is possibly due to the higher standard of communication patients may have for doctors who are supposed to be more socioemotionally oriented. A study done in the United Kingdom attempted to quantify the percentage of DO patient expectations met. The authors postulated that patients’ expectations of their interaction with their healthcare
professional are based on cognitive and tangible beliefs and values, which evolve in an ‘epiphenomenal’ way through dynamic interplay between the care and caregiver, and the patient’s subjective experience of a change in symptoms (Leach et al., 2013). Patients’ expectations are different based on culture and vary with age, gender, ethnicity, and social factors such as economic instability, and unemployment. Additionally expectations were found to vary with health condition. Some of the most important expectations were interpersonal care, followed by symptom relief, involvement in decisions, fast access, and information for self-care (Leach et al., 2013).

In order to test if patients’ expectations were met, the authors formulated a study in which questionnaires were distributed to eight hundred osteopaths. The osteopaths then distributed them to their patients that then sent the completed questionnaires to the researchers. The data of the responses to the survey was then analyzed and grouped. Out of the fifty aspects of expectations, thirty-four were prevalent, that is they had a positive response rate from seventy-five percent or greater from the respondents. Below in Table 3 are the most prevalent factors of patient expectations as per the study.
<table>
<thead>
<tr>
<th>What do you expect when you go to an osteopath?</th>
<th>% Positive responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>I expect to be able to ask questions</td>
<td>99.8%</td>
</tr>
<tr>
<td>I expect the osteopath to listen to me</td>
<td>99.1%</td>
</tr>
<tr>
<td>I expect to be treated with respect.</td>
<td>98.8%</td>
</tr>
<tr>
<td>I expect to be given a clear explanation of my problem that I understand</td>
<td>98.7%</td>
</tr>
<tr>
<td>I expect the osteopath to only treat one patient at one time</td>
<td>97.9%</td>
</tr>
<tr>
<td>I expect the osteopath to take a detailed account of my clinical history.</td>
<td>97.6%</td>
</tr>
<tr>
<td>I expect the clinic environment to be hygienic and professional looking</td>
<td>97.5%</td>
</tr>
<tr>
<td>I expect the osteopath to make me feel at ease</td>
<td>97.5%</td>
</tr>
<tr>
<td>I expect to be given advice about how to manage my symptoms myself</td>
<td>96.4%</td>
</tr>
<tr>
<td>I expect my questions to be answered to my satisfaction</td>
<td>96.2%</td>
</tr>
<tr>
<td>I expect to be reassured that the information that I am asked to provide will be kept confidential</td>
<td>96.1%</td>
</tr>
<tr>
<td>I expect to be given advice on how to prevent the same problem happening again</td>
<td>94.3%</td>
</tr>
<tr>
<td>I expect my osteopathic treatment to be value for money</td>
<td>93.5%</td>
</tr>
<tr>
<td>I expect to be given a choice of appointment times</td>
<td>92.8%</td>
</tr>
<tr>
<td>I expect the practice to display evidence of the osteopaths professional qualifications</td>
<td>92.7%</td>
</tr>
<tr>
<td>I expect the osteopath to monitor my reaction to his/her treatment</td>
<td>92.3%</td>
</tr>
<tr>
<td>I expect to be given information about the risks and side effects of treatment</td>
<td>90.7%</td>
</tr>
<tr>
<td>I expect to see the same osteopath each time</td>
<td>90.5%</td>
</tr>
<tr>
<td>I expect to be able to phone the osteopath for advice if I needed</td>
<td>89.7%</td>
</tr>
<tr>
<td>I expect the osteopath to identify my problem area with her/his hands.</td>
<td>89.5%</td>
</tr>
<tr>
<td>I expect the osteopath to be sympathetic and caring</td>
<td>88.8%</td>
</tr>
<tr>
<td>I expect to be given an explanation of what the treatment will involve before it is given</td>
<td>88.3%</td>
</tr>
<tr>
<td>I expect to be given information about the benefits of treatment</td>
<td>86.8%</td>
</tr>
<tr>
<td>I expect the consultation to last at least thirty minutes</td>
<td>85.6%</td>
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<tr>
<td>I expect the waiting area to be comfortable and relaxing</td>
<td>84.1%</td>
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<tr>
<td>I expect to be involved in making decisions about my treatment</td>
<td>84.0%</td>
</tr>
<tr>
<td>I expect the osteopath to refer me elsewhere if my symptoms are not improving</td>
<td>83.9%</td>
</tr>
<tr>
<td>I expect to be given activities or exercises to do at home</td>
<td>80.8%</td>
</tr>
<tr>
<td>I expect the practice to make provision for people with disabilities</td>
<td>80.1%</td>
</tr>
<tr>
<td>I expect to be asked about effects of previous treatment</td>
<td>80.0%</td>
</tr>
<tr>
<td>If I am not satisfied with any part of my treatment I would expect to be given information about how to make a formal complaint</td>
<td>79.6%</td>
</tr>
<tr>
<td>I would expect there to be communication between my osteopath and GP if necessary</td>
<td>78.0%</td>
</tr>
<tr>
<td>Before my first treatment I expect to be given information about what will happen during treatment.</td>
<td>77.3%</td>
</tr>
<tr>
<td>I expect to be given a clear osteopathic diagnosis of my problem at my first appointment.</td>
<td>76.0%</td>
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</tbody>
</table>
This study was one of the first to measure patient expectations when visiting a physician and quantify those that are the most important. Although some of the expectations apply only to DOs, those that were most prevalent in the study could apply to both kinds of physicians. It is not completely unreasonable to presume that patients would expect the same, if not very similar, from MDs. Overall in this study patients’ expectations appeared to be generally met well. The results provided guidance for patients about what is reasonable to expect when they seek osteopathic care, and improve the quality of care provided by osteopaths, through the regulator via standards, through educators via training, and through the professional body which supports osteopathic practices to improve service delivery (Leach et al., 2013).

It would be reasonable to assume if most of a patient’s expectations were met, then they would be ultimately satisfied with their doctor visit as a whole. Thus a measure of patient satisfaction is merely a fulfillment of their expectations. They are basically one and the same. But patient satisfaction is not only important for the mere fact of a patient being happy with their doctor visit, or even being pleased with their doctor as a whole. Patient satisfaction actually has much more profound implications.
Clinical Correlations

The patient-doctor relationship is one of the most important customer-supplier relationships that one could possibly have. It requires the utmost trust, comfort, and communication. Trust increases customer satisfaction by creating customer value, and establish long-term patient relationships. Research has pointed out that trust has a positive influence on satisfaction. Therefore, the influence of trust on service quality and customer satisfaction can not be ignored in interpersonal-based service encounters (Chang et al. 2013). Furthermore, it can be said that with trust, and thus an increased satisfaction, there is a higher propensity for a patient to listen to the doctor’s recommendations. The strength of such a relationship therefore increases a patients compliance to treatment recommendations, enhances continuing care, and promotes patient satisfaction with health care and self-reported health (Peck, 2011).

Many studies have been done in the past five decades highlighting the importance of physician communication and health outcomes. The first of its kind was a study done by an American anesthesiologist, Lawrence D. Egbert. Dr. Egbert designed an experiment in which he attempted to assess the effect of instruction, suggestion, and encouragement on a scale postoperative patients’ pain (Finset, 2014). To do this he divided ninety-seven patients into two groups, an experimental and a control group. The experimental or special care group as he called it received information about the postoperative pain they would feel during a preoperative visit. They were told what to expect, that is, where they would feel pain, how severe it would be, and how long it would last. Additionally, they were given soothing and simple instructions by the
anesthesiologist to relax. The other patients, the control group, were not given any information about what to expect postoperatively. The results were that the patients in the intervention group requested significantly less analgesics (pain relievers), were more comfortable and in better condition physically and emotionally, and were discharged from the hospital an average of two to three days earlier than the patients in the control group (Finset, 2014). Dr. Egbert argued that the preoperative visits that were given to the special treatment group helped the patients feel less nervous. He also postulated that there was a profound emotional significance to a preoperative patient or any patient with an illness, which is why physicians are able to exert such an influence upon their patient (Finset, 2014).

The study was then later repeated a few years after in an attempt to solidify the theory that communication had a significant influence on health outcome. Dr. Bruce Thomas changed the experiment slightly. Instead of the participants all being from the same pool, that is, all pre-abdominal surgery, as was done by Dr. Egbert, Dr. Thomas separated his participants even more. A pool of about two hundred patients, all visiting for different symptoms but with no obvious findings of disease and without a specific diagnosis, were given consultations by general practitioners. The consultation was given either positively or negatively. Those patients that were in the “positive” pool were given a firm diagnosis and were told that they would be feeling better in a few days. Those that were in the “negative” group were contrarily given little information regarding a diagnosis and prognosis. The results were that even after adjusting for the medications
that were given, 64% of the positive group reported to have gotten better compared to 
39% of the negative consultation group (Finset, 2014).

Lastly, the most recent attempt to reproduce the original experiment was done by 
Kapthuk et al., which focused on 289 patients with Irritable Bowel Syndrome (IBS) 
(Finset, 2014). In an “augmented” pool of patients, the practitioner was given specific 
instructions with regards to how to communicate with the patients. They were told to (a) 
to be warm and empathic in the interaction with the patient, (b) to explore psychosocial 
stressors, (c) to explore patients’ own thoughts about the illness, the personal meaning of 
the illness and own attributions of causes, (d) to communicate positive treatment 
expectations and (e) to use active listening skills (Finset, 2014). Those patients that were 
part of the augmented pool were found to have the most significant, noticeable, and 
effective change in symptoms, severity of the symptoms, and quality of life in both the 
three-week and six week post treatment measurements. (Finset, 2014)

It can be seen that based on this study and the many before it, that a positive 
experience with a physician could directly impact patient satisfaction, which has a 
significant correlation to a patient’s outcome clinically.

Since there is now a clear definition and perception as to the implications that a 
patient’s satisfaction could have, and the cycle of positivity that a patient’s satisfaction 
could generate, analysis if DOs or MDs satisfy more patients must be done. To do this 
one must take into account many variables outside of a patient’s expectations that may 
influence patient satisfaction, which ultimately relate to the type of doctor a patient would 
most likely see under such conditions.
**Patient Characteristics Effecting Satisfaction**

It has been noted that patients that are angry, cynical, and have overall negative expectations, that is they are pessimistic, are much less likely to have positive health outcomes. In a study done by Farin and Meder, the outcomes of patients with Coronary Heart Disease (CHD) were tested against the patient’s own personality and the physician-patient relationship (Farin & Meder, 2010). Although this study speaks solely towards CHD, it is reasonable to assume, psychosocial influences in general can have a profound impact on the physical health of a person (not just to patients with CHD). Anger as stated in the study is defined as when a person “perceives many situations as annoying and experiences frequent, intense anger” and cynicism is defined as “the cognitive component of the multidimensional construct “hostility” which includes negative beliefs about human nature and the belief that others are potentially threatening antagonists, who frequently have negative intentions and should be met with caution and distrust.” (Farin & Meder, 2010) Both of these variables are independent risk factors for CHD as they have a correlation with carotid artery atherosclerosis, high blood pressure, and increased risk for Myocardial Infarction (MI).

This study attempted to assess health related quality of life (HRQOL) for patients in cardiac rehabilitation. The patients were asked to fill out questionnaires, which included the scales for mental, and physical components, emotional functioning, social functioning, trust of physicians, and scales for measuring cynicism and anger. After analyzing the data the authors compiled, it was concluded that for the psychosocial HRQOL, the anger trait appeared to be more important than cynicism. Persons who tend
to be angry in many situations have a lower HRQOL after rehabilitation, even after adjusting for sociodemographic variables, characteristics of the CHD, and risk factors. Cynicism also proved to be a relevant risk factor for some of the HRQOL constructs (Farin & Meder, 2010).

The data was then adjusted for the physician-patient relationship to analyze if having a more patient-centered approach had any influence on the outcome of the HRQOL of the patients. The authors found that patients who experienced the physician as a provider who attempted to include the patient in the treatment by asking the patient for consent, asking the patient what he considered to be the causes of his condition, and encouraging the patient to give their opinion, had a higher quality of life at the end of rehabilitation than patients who experienced a “patriarchal” style of interaction (Farin & Meder, 2010).

The core philosophies of osteopathic medicine weigh heavily on a patient-centered style of care. Osteopathic physicians work in partnership with their patients. They consider the impact that lifestyle and community have on the health of each individual, and they work to break down barriers to good health (What Is Osteopathic Medicine?, n.d.). This is not to say that MDs do not practice patient-centered care, but based on many of the studies noted above, there are personality differences between the two types of physicians. Doctors of Osteopathic medicine rank high in people orientation, thus it is not unreasonable to conclude that the “typical” DO would take the time to make sure even the most pessimistic patients are communicated with, comfortable, and satisfied, more than the “typical” MD would.
From the same study on CHD and personality traits effecting HRQOL, the authors found that based on their questionnaires that although personality traits and patient satisfaction had a significant impact on the HRQOL, that the most important indicator of HRQOL was a patient’s income (Farin & Meder, 2010). Socioeconomic status has long been considered one of the most important factors that leads to illness and is indicative of a poor prognosis. Those less fortunate tend not to have as much access to care, and thus have significant ailments when a physician finally treats them. They are less likely to engage in acts of preventative care, and tend to have a gloomier outlook on life. To add to this evidence suggests that low-income populations and people without health insurance report lower communication satisfaction and reduced access to care (Verlinde et al., 2012).

A study by Verlinde et al. attempted to compare physician and patient communication with respect to social class. Social class was measured predominantly by income and education. The study revealed a positive relationship between patient’s social class and information giving. That is, patients of a higher social class received more overall communication and more information. Additionally the communication style of the patient was found to influence the doctor-patient relationship.

In a different study by Street et al., social class was measured by educational level as well. Physicians’ information giving was positively influenced by the patient’s communicative style such as question asking, affective expressiveness and opinion giving. More affective expressiveness and being assertive on the patient’s side, which is strongly related to his/her educational level, lead to more information giving on the
doctor’s side. On the other hand, patients from lower social classes received less socioemotional talk, a more directive and a less participatory consulting style characterized by less involvement in treatment decisions, a higher percentage of biomedical talk and physicians’ question asking, less diagnostic and treatment information and more physical examination. The study authors concluded that doctors give more information, more explanations, more emotional support and adapt more often a shared decision making style with higher socioeconomic status participants (Verlinde et al., 2012).

Although a patient's social standing is beyond the scope of medical practice (i.e. as a physician you're not obligated or expected to improve someone’s socioeconomic status), there is no reason why communication should be less effective with those that are less well off. Of course some of these patients may be immigrants and there may be a language barrier, but even in such a case every attempt should be made to get an appropriate medical translator so that they can be given access to healthcare that they understand. Aside from a language barrier though, it is inexcusable that patients of lower social standing get written off as being incompetent or less important by physicians and thereby experience communication that is lacking in anyway whatsoever. This lack of communication then inevitably leads to a dissatisfied patient who then will have a poorer prognosis and a lesser chance of having a healthy outcome. Add to this the fact that these patients already have experienced a lack of healthcare and are visiting the doctor as a last resort, a perpetual cycle of unhealthy individuals arises.
Doctors of Osteopathic medicine tend to give back to their communities as they generally grew up in similar environments. A relatively high proportion of students come from rural communities or inner cities (Peters et al., 1999b). Furthermore Osteopathic medical schools are more likely to seek out students who are interested in pursuing careers in primary care and in rural or underserved areas (A-Brief-Guide-to-Osteopathic-Medicine.pdf, n.d.). It is reasonable to believe that patients in these areas would be more satisfied with DOs than MDs as philosophically and traditionally DOs tend to serve underrepresented areas and are more committed to the socioeconomically disadvantaged patients they would encounter in said areas. This, along with the people oriented personalities of DOs that have been demonstrated through various studies, would give the patients more comfort through communication.

This is not to say that MDs are not entering rural or underserved communities to practice, just that it is more in line with the ideals of osteopathic medicine to practice in disadvantaged areas. As the osteopathic practice continues to grow, this complex problem will be resolved, as members of the osteopathic community ranking high in people orientation will tend to give back more and more to their communities and serve underrepresented areas. This socioeconomic gap between physicians and patients will be closed as DOs become more prominent, and patients in these areas will then be properly served, as the physicians will come to identify more with them.

Although the argument that Doctors of Osteopathic Medicine tend to serve in these areas already could be used, they are not present in substantial enough numbers to make strides in correcting the problem of health inequality. Although they may be better
suited to relate and communicate with the patients that they would come in contact with in these disadvantaged areas, they comprise such a small percentage of the amount of physicians relative to MDs.

As stated earlier, one of the most important factors in successful patient health related outcomes has to do with a patient’s ability to understand the treatment they are receiving and also to ask questions. Furthermore, a patient’s comfort is imperative and when a doctor doesn’t take the time out to explain things carefully and communicate fully with a patient, they are not satisfied. A study done by Mitchell Peck attempted to analyze another patient characteristic, specifically, the age related differences in doctor patient interaction and patient satisfaction (Peck, 2011).

Age is a significant characteristic to take into account, as the aging of the American population means that the number of physician visits by older patients will continue to increase. In about twenty years it is estimated that twenty percent of the American population will be over sixty-five years old. This study strived to attain information to answer whether doctors interact more or less in a patient centered fashion with elderly patients and if elderly patients are more or less satisfied with such interaction. The participants that were used in this study were taken over a year from 2007 to 2008. One hundred and seventy seven patients over eighteen years old were used in the sample from seventeen physicians. The patients completed a questionnaire after their visit to assess their satisfaction and the visits were recorded in order to analyze the physicians’ interaction with the patients and vise versa. Every statement by both the patient and the doctor was then grouped into one of two categories, socioemotional or
task-focused as shown in Table 4. The subcategories of each are shown in the table below. After all the data was compiled and analyzed the results were tabulated. The authors of the study found that patients over the age of 65 were more likely to have a patient-centered encounter with their physician. Furthermore, white patients and patients with higher mental health status were significantly more likely to have patient-centered encounters. Patients in patient-centered medical encounters report significantly higher levels of satisfaction (Peck, 2011).

<table>
<thead>
<tr>
<th>Task-Focused Exchange</th>
<th>Socioemotional Exchange</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transition words</td>
<td>Personal remarks/social conversation</td>
</tr>
<tr>
<td>Gives orientation/instructions</td>
<td>Laughs/jokes</td>
</tr>
<tr>
<td>Paraphrase/check for understanding</td>
<td>Shows approval</td>
</tr>
<tr>
<td>Bid for repetition</td>
<td>Gives compliment</td>
</tr>
<tr>
<td>Asks for understanding</td>
<td>Shows agreement or understanding</td>
</tr>
<tr>
<td>Asks for opinion</td>
<td>Backchannel responses (indicators of sustained interest, attentive listening)</td>
</tr>
<tr>
<td>Asks questions (closed-ended)—medical condition (open and closed-ended)</td>
<td>Empathy</td>
</tr>
<tr>
<td>Asks questions (closed-ended)—therapeutic regimen (open and closed-ended)</td>
<td>Shows concern or worry</td>
</tr>
<tr>
<td>Asks questions (closed-ended)—lifestyle (open and closed-ended)</td>
<td>Reassures, encourages</td>
</tr>
<tr>
<td>Asks questions (closed-ended)—psychosocial feelings (open and closed-ended)</td>
<td>Legitimizes</td>
</tr>
<tr>
<td>Asks questions (closed-ended)—other (open and closed-ended)</td>
<td>Partnership</td>
</tr>
<tr>
<td>Gives information—medical condition</td>
<td>Self-Disclosure</td>
</tr>
<tr>
<td>Gives information—therapeutic regimen</td>
<td>Shows direct disapproval</td>
</tr>
<tr>
<td>Gives information—lifestyle</td>
<td>Shows general criticism</td>
</tr>
<tr>
<td>Gives information—psychosocial</td>
<td>Asks for reassurance</td>
</tr>
<tr>
<td>Gives information—other</td>
<td></td>
</tr>
</tbody>
</table>

29
The association between interaction style and patient satisfaction is strongest for patients over the age of 65, that is, there is not as strong of a correlation between satisfaction and interaction style in other age groups. Additionally, the study also found that older patients were more likely than younger patients to interact with their physicians in ways consistent with patient-centered interaction. This provides implications that the style of care that a patient receives is not only up to the doctor, but that the patient also plays a significant role in setting the tone for the visit (Peck, 2011).

A limitation with this study is that the patients that participated were mostly educated with high school degrees or higher. This is not an appropriate representative sample of those who are medically underserved and socioeconomically disadvantaged in the American population. Patients that come from these areas are typically less educated and thus have inadequate health literacy. Additionally, even though the elderly who never went to school are becoming less and less prevalent, many that may have immigrated in the past seventy years are still patients in the American healthcare system today. Among these patients previous research suggests that they have a lower desire for involvement in medical decision making, perhaps because they learned the patient role at a time when traditional asymmetry in the physician patient relationship was more prevalent, before the emergence of patient-centered care (Peck, 2011).
Some of the elderly can be classified into a group as health illiterate. Inadequate health literacy is defined as “a limited capacity to obtain and understand basic health information and the services needed to make appropriate decisions.” (Liang et al., 2013) Many of these patients have communication problems, and they become embarrassed. This limits their understanding of information given by healthcare providers, leading to worsening disease control and health status. The establishment of a good physician–patient relationship, which increases patients’ trust and willingness to communicate, can break the circle. Understanding the factors that influence the physician–patient relationship may assist healthcare professionals in identifying patients who have a poor relationship in this regard. Practitioners who come into contact with such individuals professionally for the first time should consider the patient’s degree of health literacy. After identifying patients with inadequate health literacy, adjustments should be made by the physician to improve the physician–patient relationship by paying particular attention to communication, patient understanding, and involving the patients in their own health care (Liang et al., 2013).

All of these challenging patient characteristics such as those that are elderly, socioeconomically disadvantaged, or having personality traits that are not conducive to the best treatment outcomes (such as being inherently angry or cynical), are tasks a physician must face and overcome in order to provide the best healthcare possible. As to what physician, MD or DO, patients would be more satisfied with a direct conclusion cannot be made. But a speculation can be made based on the fact that DOs comparatively provide more patient centered care and have different communication styles than MDs.
One might say that the way DOs are taught in medical schools is indicative of a communication style that most DOs tend to follow. This communication style is one that makes patients feel more comfortable as the physician is more approachable. This approachability, trust, and comfort will thereby lead to a better health related quality of life and overall higher levels of patient satisfaction with DOs compared to MDs.
Healthcare Environment Related Challenges to Patient Satisfaction

Aside from being an MD or a DO, there are other factors that are not necessarily under the physician’s control. One of these is the influence of other health care professionals on the patient experience and another is the location of where the care takes place, both on a macro level and on a micro level, which is geographically and locally.

A patient’s satisfaction could be the cause of a physician’s satisfaction with his or her job. Conversely, a physician’s satisfaction could be the cause of a patient’s satisfaction. Either way, the benefits of the one’s satisfaction tend to translate to the others and initiate a cycle of satisfaction that could benefit additional patients. What hasn’t been discussed yet is the complexity of healthcare. No matter where a patient visit occurs, whether it is a hospital or private office, there are always other professionals involved in the patients care. Oftentimes, the service encounter system, including service personnel, physical facility, and other tangible elements, is regarded by customers as a part of the service (Chang et al., 2013). When a patient first walks to a visit or to seek treatment there can be secretaries, security officers, nurses, technicians, housekeeping personal, and of course a physician. All of these members of the health care team all play a significant role in the patients care and all could influence a patient’s satisfaction.

A study done by Szecsenyi et al., attempted to determine if there was a link between patient satisfaction and physician and non-physician satisfaction (Szecsenyi et al., 2011). The authors additionally tested if the influence of non-physician satisfaction was higher than physician satisfaction on the patients’ satisfaction. Their study found that high job satisfaction by non-physicians was associated with high patient satisfaction, that
non-physician satisfaction with the practice structure affects the patients perception of the physician, and that the job satisfaction of the non-physician and patient satisfaction seemed to be more significant than that of the physician satisfaction on patient satisfaction (Szecsenyi et al., 2011). This sheds light onto the fact that sometimes physician can do all they can to make sure the patient feels comfortable and communicate with them effectively, but there are instances where that is not enough. The patient’s care begins as soon as they walk through the door to the office or hospital, the first person they make contact with, and the last person they speak to all have lasting impressions. If they leave displeased with any aspect of their visit, it could affect their overall health.

The locations of patient’s visits and the staffing of that location has a lot to do with patient satisfaction as well, that is, the appropriateness of someone to work in a particular environment. A study done in 2009 attempted to break down patient satisfaction in hospitals specifically (Chen et al. 2013). The authors postulated that hospitals are different in terms of the health care provided because hospitalists exclusively give the care. Their thought was that patients would be less satisfied with the care they receive in the hospital because they do not have an established rapport with the patient seeking care compared to when the patients visit their general practitioner. While hospitalists may have greater expertise in the day-to-day care of the hospitalized patient, they generally do not know the patient and cannot cater to patient’s preferences in ways that the primary care provider might (Chen et al., 2013).

The study compared three types of hospitals; those that use hospitalists, those that are “mixed” hospitals, that is, they use both hospitalists and non-hospitalists, and those
that are “non-hospitalist” hospitals. They aimed to focus on two facets of hospital care: patient experience with discharge planning and patient experience with physician communication.

By taking a sample of about one hundred and thirty thousand patients and separating the type of physician based on how many of their claims came from the care of hospitalized patients (over 90%) to classify them as hospitalist hospitals, the authors of the study devised a questionnaire to measure overall satisfaction during a patient's visit to said hospital. The patients were asked to rate their experience on a scale of zero to ten and expand on whether or not they would recommend the hospital. They additionally were given a twenty-four-question questionnaire, which included communication with nurse, communication with physician, responsiveness of the staff, pain control, communication about medications, adequacy of discharge planning, cleanliness of the room, and quietness of the room (Chen et al., 2013).

After examining the relationship between hospitalists and patient experience using models that accounted for differences in hospital characteristics, the authors found that the proportion of patients who were satisfied with their overall care was higher at hospitalist compared to non-hospitalist hospitals (65.6% vs. 63.9%). Subsequently, patients were more likely to recommend their hospital if they had been cared for at a hospitalist vs. non-hospitalist hospital (66.0% vs. 63.4%) (Chen et al., 2013). The results are shown in graph form below (Figure 5).
Although the patients were more satisfied with hospitalist hospitals, which refuted the authors’ original hypothesis that patients would be less satisfied in hospitalist hospitals, they still had the right idea in that the satisfaction measurements in this case had no correlation to physician communication. In fact patients cared for at hospitalist hospitals were slightly less likely to be satisfied with communication with doctors (Chen et al., 2013). Their original hypothesis lest being refuted, was in a way partly confirmed in that the authors believed the cause of less patient satisfaction would be mainly due to communication reasons specifically due to hospitalists having less familiarity with the history and preferences of their patients compared to primary care physicians. Although the data is not significant enough to confirm the hypothesis, and that it was actually

**Figure 5: Propensity to Recommend a Hospital and Overall Satisfaction With a Hospital Among Patients That Visit Hospitals With Non-Hospitalists, Hospitalists, and A Mix of The Two.**

Patients that visit hospitalist hospitals are most likely to recommend that hospital and are most satisfied with their overall hospital experience. Taken from Chen et al.
rejected for reasons besides this, patient communication is nonetheless slightly less among hospitalists as expected.

Patients’ satisfaction is variable depending on the place of care. One can suspect that communication would be more important in a private primary care setting than it is in a hospital. But in a hospital there seems to be a change in measures of satisfaction. This may be due to the fact that patients who are hospitalized have something severe enough occurring to then cause them to be hospitalized in the first place, and that patients that visit their primary care physicians don’t have as many life threatening or pressing issues (otherwise they would go directly to the hospital).

Once in the hospital though, it is not communication that is a patient’s priority in assessing how good the care is. The study found that it more a patient’s satisfaction with inpatient care including their experience at discharge. This is most likely due to the fact that although they are not familiar with the physicians, they still have access to a physician twenty-four hours, seven days a week and additionally that the hospitalists are trained and practice (in this case ninety percent of the time) in hospitals. They are therefore most fit to see the patient through care most related to hospital related ailments.
Conclusion

There is no consensus among the general population on whether DOs or MDs give higher levels of overall patient satisfaction. There are simply studies that address whether or not there are differences among the two. Such studies show that there are differences indeed, and said differences are the basis of the osteopathic principles being put to use in a clinical setting. Although these may subliminally or indirectly imply that there may be a more positive patient experience overall, it does not give concrete data or evidence from a patient prospective of such a claim.

This paper attempted to dive deeper in the current literature with an intention to deduce if patients would be more satisfied with Doctors of Osteopathic Medicine or Medical Doctors. Based on the published studies in current circulation, it was evident that there was in fact a difference between the way the two types of physicians’ learned and practiced. Even as a pre-medical student it has been said that there are significant differences between the two types of applicants that apply to the two different types of medical schools. On one hand the Osteopathic Medical schools seek out a certain type of applicant, one that is more socioemotionally oriented, traditionally grew up in medical underserved or socioeconomically disadvantaged areas, and shows a high commitment to primary care. Osteopathic Medical schools tend to focus less on test scores and take a holistic view at the applicants while the more “technoscientifically” oriented MD schools place significantly more weight on test scores and grades (“A-Brief-Guide-to-Osteopathic-Medicine.pdf,” n.d.).
Findings presented that after being selected by medical schools for the characteristics described above, graduates of osteopathic medical schools were found to be more socioemotionally oriented than the MDs. Additionally, DOs reported a significantly higher commitment to primary care than their MD counterparts.

Lastly, as practitioners, the DOs were found to put what separates them from the MDs philosophically into use in their day-to-day practice. DOs tended to rate higher in patient communication than MDs, ranking high in measures of people orientation, such as care for family health, social activities, and calling a patient by their first name.

Based on these findings one might speculate that patients would likely be more satisfied with a DO as opposed to an MD. Furthermore, as a patient’s satisfaction is indicative of their health related quality of life, patients that visit DO physicians would most likely have a better health related quality of life.

A future study with the aim to understand and quantify the differences between DO and MD patient interaction and satisfaction would be very beneficial to society. Such a study could be done by recording patient responses on the basis of satisfaction immediately following a doctor’s visit, how comfortable the patient feels with his or her doctor, and a long term (6 month) follow up, which would allow the patient to retrospectively look back on their experience and rerate the doctor based on how successful the prognosis was. The study will be conducted as a random blinded trial in which the patient will not know what type of doctor they are seeing. It might even work better if patients in the study were seen by two doctors at the same time in the same room. The doctors would work together to consult and treat the patient. This would
eliminate any other conflicting variables and not give one physician any type of advantage.

The hypothesis is that there would be greater satisfaction among those patients that visited the DOs based on their comfort level and the doctor’s ability to relate to the patients on a very human level. One would anticipate that the success of treatment would show an extremely close correlation to the measurements of patient satisfaction.

The results of this study would give paramount implications for the way patients react to certain means of communication and could only help further the field of medicine and provide us with significant information regarding patient treatment. By picking apart the different facets of each physicians care that patients respond well to, they could be combined and practiced by all physicians to optimize care.

Doctors of Osteopathy are becoming more prevalent in the U.S. healthcare system today and by 2015 are expected to have merged into a single graduate medical education (GME) accreditation system that will evaluate and provide accountability for the competency of physician residents consistently across all GME programs (“AOA and ACGME Agree to Single GME Accreditation System,” n.d.). It is only a matter of time until some of the core philosophies of osteopathy are practiced and adopted by MDs. Whether this includes facets of osteopathy like OMM, or the style of communication and socioemotional orientation inherent in the DO philosophy, there is bound to be something the two practices could learn from each other.
ADDENDUM

Future Challenges

In the future of health care in the United States there will be more and more challenges affecting the physician patient relationship and thus impacting the satisfaction of the patients with their care. In the technologically sophisticated and ever changing society we live in today, advances in the way people communicate and the way they view healthcare will continue to adjust with the times. One of the problems physicians are currently facing and will continue to face is the impact of the Internet on health care and the patient visit as shown by Murray et al. in an analysis of patients visits in the years 2000 and 2001.

The researchers sent out surveys in which a nationally representative sample of one thousand and fifty U.S. physicians responded to. Of this pool of respondents, eighty five percent reported experience with a patient bringing Internet information to a visit. The authors of the study postulated that this cause a “profound effect on medicine” and thus sought out to conclude if this information was beneficial or harmful to the physician-patient relationship, time efficiency of the visit, quality of care received by the patient, and the patients health outcomes, all from the point of view of the physician. The advantages of the Internet as a source of health information include convenient access to a massive volume of information, ease of updating information, and the potential for formats that facilitate the understanding and retention of information. Health information on the Internet may make patients better informed, leading to better health outcomes,
more appropriate use of health service resources, and a stronger physician-patient relationship (Murray et al., 2003).

Contrarily, health information on the Internet may be misleading or misinterpreted, thwarting health behaviors and health outcomes, or resulting in inappropriate requests for clinical interventions. Physicians may succumb to inappropriate requests, as refusal may be time consuming, or because of fear that refusal would weaken the physician-patient relationship. Responding to inappropriate patient requests may be particularly difficult in managed care, where patients may believe that physician refusals may be motivated by the need to control costs. Some physicians may have difficulty adjusting to a more-equal role with patients or may experience conflict with more-assertive patients (Murray et al., 2003).

As there is little information on physicians’ experience with patients who have sought health information on the Internet, a study was done in which a questionnaire which consisted of three parts was devised and sent to physicians. The purpose of the first part was to gain an understanding about the general view of health information and the Internet. The purpose of the second part was to see request information about the last time a patient brought in information form the Internet. And the purpose of the final part was to analyze the physician demographics in terms of how many patients they see a week, the demographics of said patients, and the geographic setting of practice.

Overall the physicians were found to have a positive outlook about the recent increase in health information on the Internet. In fact three fourths of the sample were in agreement that it was a good or very good thing, but almost eighty five percent were in
agreement that their patients were only fair or poor at appraising the quality of information on a website. Most of these patients brought the information they obtained on the Internet with them to seek the physicians’ opinion on it, and not as often for reason such as wanting a change in medication or a referral to a specialist. About half of the time the physicians did as the patients requested. With that being said about ninety-two percent of the physicians believed the Internet did not harm the physician-patient relationship although about forty percent reported that it harmed their time efficiency. Lastly most physicians’ believed that it did not have an effect on quality of care or health outcomes of the patients.

Physicians believed that patients bringing in accurate, relevant online information was beneficial and welcomed it. Conversely, physicians believed that inaccurate or irrelevant information harmed the quality of care, health outcomes, time efficiency, and the physician-patient relationship. Improving the accuracy and relevance of online information available to patients may improve outcomes of interest to health care providers, payers, and consumers.

Ethically, physicians should refuse inappropriate requests in order to avoid harming the patient and to use health service resources irresponsibly. However, previous studies have suggested that refusing patient requests will reduce patient satisfaction. Physicians may be reluctant to jeopardize patient satisfaction because it is used as an index of quality of their own rating, and can impact on patient outcome. This dilemma may be particularly acute in managed care, where patients believe that physicians refuse requests on financial grounds rather than clinical grounds. Physicians also perceive that
refusing clinically inappropriate requests is damaging to time efficiency. This perception, or reality, may make physicians unwilling to engage in such discussions, and may, in turn, lead to more inappropriate requests being filled, with subsequent upward pressure on health care costs (Murray et al., 2003).

Additionally a small percent of physicians felt that patients were challenging their authority during the visit. This in turn harmed the physician-patient relationship, and resulted in a lesser quality of care, health outcomes, and time efficiency. Some physicians may be having difficulty adjusting to a more-equal relationship, where the patient has greater access to medical information, or some patients may fail to acknowledge the physician's clinical expertise (Murray et al., 2003).

Aside from patients becoming more empowered with the use of the Internet in medical contexts, from a physician perspective the use and incorporation of electronic medical records will also impact the way healthcare is practiced in the United States in the future (Norman, Aikins, & Binka, 2011).

People today are reliant on technology more than ever. In almost every facet of our daily lives one can see how prevalent and integrated new inventions have become. Even in the most personal of all workplaces, doctor’s offices and hospitals, it is evident that there is a vast difference in the way healthcare is managed today, from how it was managed years ago. Things like globalization and rapid technological advancements will make it increasingly difficult for medical professionals to manage and diagnose new complications that will arise in the clinical world.
There has been an increasing push towards consolidating medical records electronically into one, universal, computerized system. This will allow for physicians, hospitals, and primary care offices to communicate critical information about patients with one another in an extremely efficient manner. The issue is that the implementation of this system and movement away from the traditional charting methods will take time and some getting used to. It will be easier for new doctors entering the field to take advantage of it, but getting a physician that has been practicing for years to change his habits will be more of a challenge. Until electronic medical records are fully implemented, there will be somewhat of a disconnect in the medical field during this transition period. It will be up to physicians to see past this and work together in order to secure a more advanced and efficient future of healthcare.

Another impact that technology will continue to have on the future of health care delivery is with regard to the increasing prevalence and use of social media in today’s society and thereby the emergence of psychological problems due to things such as cyber bullying among the youth. Although in the medical profession there really isn’t much room for keeping up with the latest social phenomena, the physician of the future truly has to be well rounded in every sense. They must keep up with the evolving trends of society now more than ever. A 21st century physician must see beyond treating the purely physical ailments of their patients, and learn how to be impactful in a social, mental, and psychological respect.

Whilst the advent of the Internet and advanced telecommunication presents many advantages and opportunities for innovation and scientific progress, the medical
community and society as a whole must learn to adopt new technologies in a manner that preserves the fundamental aspects of human interaction.
REFERENCES


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EDUCATION:

Boston University School of Medicine, Boston, MA
Division of Graduate Medical Sciences
Masters of Science in Medical Sciences
Graduation Date: September 2014

Syracuse University, Syracuse, NY
College of Arts & Sciences
B.S. Biology. Minor in Psychology. Pre-Medicine Concentration
Graduated Magna Cum Laude May 2013
GPA: 3.615

WORK EXPERIENCE:

Health Alliance of the Hudson Valley (Kingston Hospital)
Summer 2010 – Present
Pharmacy Technician
• Assisted with management of inventory and filled patient cassettes from cart fill list.
• Obtained physician’s orders and delivered medications and supplies on a routine basis.
• Entered patient charges and credit into hospital data system on a daily basis.
• Assisted in dispensing of employee prescriptions and OTC’s.
Health Care Associate/Patient Care Transporter
• Transported patients and charts to and from treatment areas.
• Maintained oxygen supplies and inventory to ensure correct settings for patients transport.
• Conveyed information vital to patients care between nursing floor & ancillary departments.

Hillside Manor Restaurant
Winter 2004 – Present
Coat Check & Valet manager
• Managed, worked, and organized schedule for the valet parking and coat check.
• Developed strong work ethic and earned money toward offsetting college living expenses.
Busboy/Waiter
• Bussed/Waited on tables in the restaurant.

VOLUNTEER EXPERIENCE:

Crouse Hospital
Fall 2011 – Present
Volunteer on Cardiology Floor and Emergency Department
• Visited/Assisted patients and relieved nurses and care technicians of some basic duties such as discharging patients.
• Assisted clerk staff by putting charts together and taking discharged patients’ charts apart.
• Transferred medical records to other departments as well as samples to the lab.

Global Brigades: Honduras
Winter 2011 & 2012
Medical Brigadier
• Set up a medical/dental clinic in La Concepcion, Honduras & provided triage.
• Communicated with patients in Spanish as to what their symptoms/ailments were as well as past medical histories.
• Demonstrated appropriate dental hygiene & assisted the dentist in performing extractions, fillings, and cleanings.
• Input data into computer to monitor future health trends of patient and overall community.

**LEADERSHIP:**

**Sigma Phi Epsilon Fraternity**
Fall 2010 – present

*Chaplain, Risk Management Chair, Head Phi Coordinator, Philanthropy Chair*
• Maintained, updated, and enforced chapter bylaws & administer disciplinary actions for violation of standards.
• Organized SigEp dodgeball to benefit Youth AIDS & encouraged chapter participation in various other philanthropies.

**Biology Department**
Spring 2010
*Peer Leader*
• Responsible for reinforcing material to small groups of students in one-hour problem solving sessions each week.

**College of Arts & Sciences**
Fall 2010 – Spring 2011
*Student Peer Advisor*
• Mentored a small group of the incoming freshman class & advised new students as to what classes to take.
• Familiarized students with the university.

**SKILLS & HOBBIES:**
• Fluent in Greek writing, reading, and conversation
• Some Spanish speaking and reading
• Cheesemaker