

UNIVERSITY OF OKLAHOMA
GRADUATE COLLEGE

PATIENT EXPECTATIONS PREDICTING MEDICAL REQUESTS BASED ON
STATUS CHARACTERISTICS

A THESIS
SUBMITTED TO THE GRADUATE FACULTY
in partial fulfillment of the requirements for the
Degree of
MASTER OF ARTS

By
EMILY J. REEL
Norman, Oklahoma
2021

PATIENT EXPECTATIONS PREDICTING MEDICAL REQUESTS BASED ON
STATUS CHARACTERISTICS

A THESIS APPROVED FOR THE
DEPARTMENT OF SOCIOLOGY

BY THE COMMITTEE CONSISTING OF

Dr. B. Mitchell Peck, Chair

Dr. Ann Beutel

Dr. John Carl

© Copyright by EMILY J. REEL 2021
All Rights Reserved

I dedicate this thesis to my family, friends, and colleagues at the University of Oklahoma who
believed in me fiercely and supported me relentlessly.

I couldn't be here without your support and encouragement.

Acknowledgements

I would first like to gratefully acknowledge my thesis advisor, Dr. B. Mitchell Peck, of the Sociology Department at the University of Oklahoma. His tough love crafted the highs and lows of my 5-Year Accelerated Bachelors/Master's program, and I will always remember the feelings of support and encouragement as he pushed me to reach higher than I ever thought was academically possible. I am thankful for his presence and support in helping me turn from an anxious undergraduate student to a very proud graduate of the University of Oklahoma.

I would also like to thank Dr. Ann Beutel, who led me through my sociology capstone as well as my master's committee and inspired me to continuously dig deep and work with an incredible wit, kindness, and poise. I am thankful to have her as a role model, and I am thankful to have experienced her joy and attention to detail for studying sociology.

I would additionally like to thank Dr. John Carl, who taught me "Intro to Sociology", as well as supported me ferociously as a member of my committee. I still tear up thinking of the first time that someone in academia told me that I would be "smart enough" for a graduate degree, and I am forever indebted to your kindness and dedication to help me see my worth. I hope to someday inspire someone as you have inspired me.

Completing the 5-year program was possible due to each of your commitment to building relationships with students in every class, and your attention to seeing us through.

Table of Contents

<i>Acknowledgements</i>	<i>v</i>
<i>List of Tables</i>	<i>viii</i>
<i>List of Figures</i>	<i>ix</i>
<i>Abstract</i>	<i>x</i>
<i>Chapter 1: Introduction</i>	<i>1</i>
<i>Chapter 2: Theoretical Framework</i>	<i>2</i>
<i>Status Characteristics Theory</i>	<i>2</i>
<i>Chapter 3: Literature Review</i>	<i>4</i>
<i>Patient versus Physician-centered Approaches</i>	<i>4</i>
<i>Race in the Doctor-Patient Relationship</i>	<i>6</i>
<i>Gender and the Doctor-Patient Relationship</i>	<i>9</i>
<i>Intersectionality in the Doctor-Patient Relationship</i>	<i>10</i>
<i>Education in the Doctor-Patient Relationship</i>	<i>11</i>
<i>Chapter 4: Methods</i>	<i>14</i>
<i>Research Questions</i>	<i>14</i>
<i>Hypotheses</i>	<i>15</i>
<i>Data</i>	<i>15</i>
<i>Predicting Variables</i>	<i>17</i>
<i>Outcome Variable</i>	<i>19</i>
<i>Control Variables</i>	<i>20</i>
<i>Analysis</i>	<i>22</i>
<i>Chapter 5: Results</i>	<i>23</i>
<i>Descriptive Statistics of the Patient Level Data Set</i>	<i>23</i>

<i>Descriptive Statistics of the Expectation Level Data Set</i>	25
<i>Regression Results</i>	26
Chapter 6: Discussion	32
<i>Limitations</i>	34
<i>Future Research</i>	36
Chapter 7: Conclusion	37
<i>Implications</i>	38
Appendix A: Tables	43
<i>Table 2: Descriptive Statistics – Expectation Level Data</i>	45
<i>Table 3. Status Characteristics Predicting Requested Medications</i>	46
<i>Table 4. Status Characteristics Predicting Requested Tests</i>	47
<i>Table 5. Status Characteristics Predicting Requested Referrals</i>	48
Appendix B: Figures	49
<i>Figure 1. Status Characteristics Predicting Medical Experiences</i>	50
Appendix C: Specific Types of Expected Medical Experiences	51
Appendix D: Patient Questionnaire	53

List of Tables

<i>Table 1. Descriptive Statistics – Patient Level Data</i>	44
<i>Table 2: Descriptive Statistics – Expectation Level Data</i>	45
<i>Table 3. Status Characteristics Predicting Requested Medications</i>	46
<i>Table 4. Status Characteristics Predicting Requested Tests</i>	47
<i>Table 5. Status Characteristics Predicting Requested Referrals</i>	48

List of Figures

Figure 1. Status Characteristics Predicting Medical Experiences 50

Abstract

This research I conduct uses the Patient's Likely Expectations and Satisfaction in care Survey (PLEASS 2007) to analyze how patients who have expectations about medical experiences request these based on status characteristic differences between them and their doctors. Previous research shows that people interact differently based on their race, gender, and level of education, and this has effects on the medical encounter. I aim to understand how status characteristic identities of race, gender, and education affect how patients with specific expectations make requests about medications, tests, or referrals. I control for marital status, income, visits to the doctor in the past 6 months, doctor's years practicing, and length of visit. I used a logistic regression analysis to predict these effects on the outcome variable, which was if the experience was requested. I base this research on Status Characteristics Theory, and I restructured the PLEASS 2007 so that expectations were the observations of analysis rather than the patients themselves. For medications, patients and doctors having the same racial and educational status resulted in the highest predicted probabilities of making a request that the patient previously expressed. A woman patient had the highest predicted probability of making a medication request to a man doctor. For tests, the opposite pattern was true. Same gender resulted in the highest predicted probability of requesting tests whereas the doctor having the higher race and educational status resulted in a higher predicted probability of a test request. For referrals, patients and doctors having the same racial, gender, and educational statuses resulted in the highest predicted probabilities of requesting experiences.

Keywords: medical requests, status characteristics theory, medical expectations

Chapter 1: Introduction

This research is centered on if and what patients that have expectations for their medical experience request them once in the room with their doctor. In some cases, patients are willing to give their trust to their doctor and follow the doctor's knowledge and expertise to know what tests, medications, or referrals they need. In this case, the patient does not have their own expectations. But on the other hand, some patients enter with certain expectations for the medical encounter and therefore a different framework from the one previously mentioned. These patients are anticipating a level of participation in their encounter and expecting to discuss a certain outcome.

Attending a doctor's appointment brings with it many interactions and situations that may make the encounter different for each doctor-patient dyad. Outside of the various day-to-day factors that influence everyday interactions, such as mood and/or environment that may affect one's experience, there are also several demographic factors that influence the interaction. Prior research has studied the effects of gender, race, education, and age to better understand how different statuses influence the doctor-patient medical encounter. These are considered social determinants of health, which also include where people are born, how they live, their socioeconomic status, and employment (Artiga and Hinton 2018). In this study, I analyze if patients who express an expectation in the pre-encounter questionnaire request their expectation in the doctor's visit as well as if certain demographic characteristics play a role in those requests. I analyze if status characteristic identity is related to how patients interact with their doctors, specifically if patients who expect certain medical experiences, such as medications, tests, or referrals, actually ask their doctor for those experiences during the medical encounter. I analyze the results by status characteristics of both parties in the doctor-patient dyad. The question I pose

is “Do people with expectations about their medical encounter request them from their doctor, and how are those expectations affected by status characteristics?”

This is important when considering status characteristics theory, which states that there are categories in society that deem different characteristics of groups have varying levels of worth (Berger, Cohen, and Zelditch 1972). This tells us that if you are a man or if you are white, you would have a higher status characteristic, or level of worth than if you were a woman or non-white. This question is important in understanding a patient’s comfort and security in the medical setting, regardless of their race, gender, or level of education, and ensuring that different status characteristics and unequal power dynamics still allow for a comfortable setting for patients to receive care. The aim, for example, is to have a situation where women patients are still comfortable requesting from men doctors, as well as non-white patients still feel like they will be heard and validated by requesting experiences from their doctors, or even that the encounter is not intimidating because of the doctor’s high status or level of education.

Chapter 2: Theoretical Framework

Status Characteristics Theory

The theory I use in this study, and an important theory to consider in understanding doctor/patient relationships is status characteristics theory. I use status characteristics theory as a framework for this research rather than formally testing this theory. Statuses themselves are characteristics that can be organized, such as “age, sex, race, ethnicity, education, occupation, physical attractiveness, or intelligence quotients” (Berger, Rosenholtz, and Zelditch 1980:479). Status characteristics theory was derived from expectation states theory, which is the idea that people gather information about each other which influences what they expect out of the other person and therefore the interaction the two of them will hold, which has helped construct the

concept of status differences (Berger and Wagner 2016). It has also been used to better understand power and prestige orders and dynamics, and the premise is that expectations that individuals hold shape the interactions that they have (Berger 1958; Peck and Conner 2011).

Status Characteristics Theory can be used to understand the effects of characteristics on the encounter in two ways. The two types of characteristics are specific and diffuse characteristics. (Peck and Conner 2011). Specific characteristics are socially valued skills and accomplishments, such as being a doctor or having an education. Diffuse characteristics, on the other hand, cannot be earned and are innate to the individual. Examples of these are race, gender, and age. Therefore, how the doctor and the patient view and respect each other can change between different doctor-patient pairs. For example, previous research has found that comments were more likely to be accepted when made by whoever was perceived to have the highest status in the encounter, be it the doctor or the patient (Berger et al. 1972).

With this, the doctors would always have the most power and status in the relationship just for having more medical information and having a high level of education, but the medical community has been working for a few decades on moving away from physician-centered-care and into patient-centered-care, which puts the patient's needs, concerns, and understandings above the physicians (Bertakis and Azari 2011). When status and power are not immediately recognized solely on specific characteristics, diffuse characteristics are more important (Berger et al. 1972).

Status is influential in the doctor-patient relationship, and previous literature shows that it is applicable in understanding the dynamics of task-oriented groups, such as a doctor gathering data or educating their patients about a topic. It is also applicable in understanding how that status influences who holds the most power in the group (Berger et al. 1972; Roter and Larson

2002). There are implicitly some ideas that intellectual competency increases a person's value, which includes status characteristics and the respect that individuals give each other based on status. I can predict that these status characteristics could influence the doctor-patient encounter by knowing that gender, race, and education affect interactions in groups and especially if the groups are trying to complete a task, such as trying to receive a medication, test, or referral. My research uses this knowledge as a springboard to understand if there is a connection between whether patients voice their requests after having expectations and how that relates to the doctor's and patient's status characteristics.

Chapter 3: Literature Review

Most literature focuses on the relationships between expectations and patient satisfaction or on whether or not the expectations were met, and the doctor fulfilled those expectations (Bertakis 2009; Peck and Denney 2012; Schinkel et al. 2016). In this research I analyze whether people with expectations request them or not, and how status characteristics of both the patient and the doctor may affect the patient's decision to request their expectations.

Patient versus Physician-centered Approaches

Patient-centered care is a multifaceted concept that is used to focus the patient's needs, concerns, and understandings as the primary goal rather than the physician's needs or wants. With a deep understanding of this approach, we might see an increase in patients that feel comfortable and respected enough to speak their wants and needs in their medical encounter. The patient will always hold a level of expertise about their own care and body and having an environment in which they feel able to express that is important and a goal of patient-centered care.

However, the industry's roots in medical paternalism, or the ability for the physician to act without expressed care or understanding of the patient's freedoms in what the physician believes to be the patient's best interests, are difficult to unwind from current medical practice (Weiss 1985). Paternalistic care assumes trust between doctor and patient and expects the patient to have accepting views of whatever experience the doctor wishes to provide, disregarding the fact that patient participation leads to higher satisfaction and higher rates of adherence to their treatment (Beisecker and Beisecker 2009; Peck and Denney 2012; Safran et al. 1998). Moving away from paternalistic care opens the window for patients to discuss their wants and needs more openly, which is where this research aims at understanding how patients enter the encounter with expectations, and if they feel comfortable enough to discuss and request them in the medical encounter. Therefore, the patient versus physician-centered care approaches is relevant to this research.

Additionally, this paternalistic framework translates into an issue of status, as medical interactions were seen to be most physician-centered when the physicians had a higher status than the patients. This was seen in multiple ways, including race, where white physicians were more physician-centered when their patients were non-white, and gender, when physicians who were men were more physician-centered when their patients were women (Peck and Conner 2011). Paternalism occurs when the doctor believes that they can override the patient's preferences and make the best decision. Best practices include doctors and patients cooperating together in a treatment plan (Rodriguez-Osorio and Dominguez-Cherit 2008). The medical industry has worked for decades for alternatives to the paternalistic approach, and the patient-centered approach is being studied to understand its link between improvements in the outcomes and satisfaction of its patients (Epstein et al. 2005; McCormack et al. 2011). The evolution of the

patient-centered approach is important in this analysis for understanding that patients get treated differently based on their race or gender, and their doctor may be more likely to speak to them differently or make different decisions about the patient's care based on their status characteristics. Further, this research specifically targets the question of how patients request their medical expectations, which could be affected by the status characteristics of the doctor-patient dyad that they are in.

Race in the Doctor-Patient Relationship

Race and ethnic minority group status may be important health indicators due to the racism that occurs in the healthcare system. That being said, Valeri et al. (2016) argue that “inequitable race relations, not ‘race’ per se, are the cause of racial/ethnic health inequities, that is, unjust, unfair, and preventable social inequalities in health”, which is a framework that is important to be explicit about (Valeri et al. 2016:83). In the way that race, and ethnicity are typically discussed in social science research, race is simply a predicting variable, insinuating that having a certain race determines biological or social effects. There is importance in understanding that race is not the factor, for example, in how people request medical experiences at different rates, but the varying levels of racism that they combat influence their decisions in participating in their medical encounter in different ways.

Due to the history that people of color have experienced with the medical system, there is a large amount of mistrust, misdiagnosis, and misunderstanding (Suite et al. 2007). This stems from a troubling history of people of color in the medical system, which includes racist practices in medical research, diagnoses/misdiagnoses, and clinical management (Suite et al. 2007). Suite et al. discuss how history-sensitive mental healthcare can reduce people of color's “cultural mistrust” of mental health services, which would in turn reduce the morbidity rates and mortality

rates in non-white populations. This racist medical history began in the slavery era of the United States, including Black men and women becoming dissection experiments and autopsy specimens, as well as Black women being subjected to experiments by the “father of modern gynecology” who used slave women’s bodies to test procedures without proper consent and anesthesia before finding correct practices to be used on white women (Suite et al. 2007). Alvin F. Poussaint M.D. and Amy Alexander (2001) , authors of “Lay My Burden Down: Suicide and the Mental Health Crisis among African-Americans”, remarked, “It is not hard to imagine, however, that news of this and similar incidents spread through the local black population, giving rise to a not unreasonable fear of white medical doctors” (Poussaint and Alexander 2001:69). This mistrust and its lasting effects are analyzed in this research.

Additionally, Smith (2010) explains that race is the most important determinant of trust. Smith summarizes that trust is an important measure for when there is a chance for something negative or unexpected to happen, when activities are not continually visible, understood, or transparent, and trust is needed when the negative outcome of a moment is significant and more extreme than the positive outcome. In a doctor/patient relationship, the doctor not receiving trust due to misunderstandings, previous negative experiences, or lack of transparency may cause the patient to not trust the doctor and therefore not want to participate and find satisfaction in their healthcare experiences (Smith 2010).

In terms of the patient-centered care referenced previously, those in racial and ethnic minority groups tend to receive lower quality health care and are typically less satisfied with the medical encounter (Peck and Denney 2012). However, as with gender, patients who are in racial or ethnic concordance with their doctor tend to be more satisfied with their medical encounter (Peck and Denney 2012). Additionally, patients who are in an ethnic minority group tend to

participate less in their medical encounters, are less satisfied, have more unmet needs, and a lower understanding of the information given to them by their doctor (Schinkel et al. 2016). With this understanding, it could also be true that non-white patients may have fewer expectations when entering their medical encounter or leave without requesting their expectations about receiving medications, tests, or referrals. During the medical encounter, non-white doctors talk more than white doctors, who are twice as likely to have a physician-centered-encounter, while almost half of the encounters with white physicians are patient-centered (Peck and Denney 2012). In Peck and Denney's 2012 study on the effects of physician and patient race and gender, race was more significant. The ratio of doctor to patient talking might also have a correlation with how comfortable the patient is in speaking and/or requesting experiences in their medical encounter. Peck and Denney, however, ultimately found that physician characteristics may have little to do with their patient's assessment and satisfaction within the medical encounter. There was no reported difference in trust or satisfaction that could be related to physician race, gender, or level of experience, which runs contrary to the previous research that patients prefer gender or race concordance with their physicians (Peck and Denney 2012). This study will add to this existing research.

Additionally, in Schinkel's 2016 study of ethnic minority patients, it was revealed that when there is concordance between how much the patient expected to participate versus how much they perceived themselves to have participated, there is more satisfaction and fulfillment from the interaction. This is important for ethnic minority groups and marginalized communities as doctors should be able to adapt to their patients' expectations and needs for the medical encounter in order to center the care around the patient and make their experience more successful (Schinkel et al. 2016). This could help us better understand how if, in a physician-

centered-encounter or when the doctor is doing most of the talking, the patient might feel less expected to participate and therefore do not voice their expectations.

Gender and the Doctor-Patient Relationship

Regarding gender, there are differences in how patients and doctors interact with each other. There are specific dynamics at play for female doctors, which could be in part due to the “feminization” of the medical field, which indicates that over time, there has been a greater emphasis on “humanistic” care (Bertakis 2009). Male doctors spend more time focusing on medical history taking and physical exams (Bertakis 2009). Additionally, male doctors have been seen to be less empathetic in their communication styles, ask fewer questions to the patient, and in turn provide less information to the patient (Peck and Denney 2012). This would be believed to have more of a doctor-centered approach rather than a patient-centered approach. In Bertakis and Azari’s 2011 study of the patient-centered approach, it was revealed that female patients were more likely to ask questions and therefore receive more information, as well as counseling and preventative services (Bertakis and Azari 2011). Research consistently shows that females play a more active role in their medical encounter (Peck and Denney 2012).

The Bertakis (2009) study also found that patient satisfaction was correlated to both doctor behavior and gender, as patients with female doctors were significantly more satisfied, while controlling for patient characteristics and doctor practice style. In general, patients who participate more in their medical encounter are more satisfied and have higher rates of adherence to their treatment (Peck and Denney 2012). Additionally, “poor adherence” could also reflect the patient not wanting/feeling comfortable with what the doctor is providing the encounter, which is important to remember when discussing participation.

In Bertakis and Azari's 2011 study of the patient-centered approach, it was revealed that female patients were more likely to ask questions and therefore receive more information, as well as counseling and preventative services. Due to the participatory nature of the visit, female patients' visits were more likely to be characterized as having greater patient-centered communication, although they were still more likely to have higher medical care utilization and those associated charges (Bertakis and Azari 2011). In general, it is believed that females play a more active role in their medical encounter, which will in part be tested in this research to understand how the participatory nature of both the doctor and patient influence the medical encounter (Peck and Denney 2012).

Intersectionality in the Doctor-Patient Relationship

Intersectionality is a concept that bridges race, gender, and other social identities and understanding how they combine to create in themselves, unique forms of oppression (Wilson et al. 2019). Kimberlé Crenshaw, the legal theorist, first coined the term "intersectionality" but was not the first to recognize how Black women in particular experience their own form of oppression due to the ways that race and gender are co-constructed (Wilson et al. 2019).

Rosenthal and Lobel's research on adverse birth outcomes for Black American women aids the current research in understanding intersectionality in healthcare (Rosenthal and Lobel 2011). They discuss "gendered racism" which arises from society's perceptions of Black women's sexuality, and the oppressive and marginalizing themes believed about their bodies and Black women's capabilities for motherhood.

Additionally, Flores studied Latina physicians during the COVID-19 pandemic and the racism they encountered from patients and other physicians (Flores 2020). Their skills were undervalued, and they were often presumed to have lower qualifications than they had, such as

patients believing that they were nurses rather than physicians. This is an important article for the current research in that in understanding a doctor/patient encounter, the interactions go both ways. A negative or less-than-positive perception of the patient's doctor may lead to decreased trust in their doctor and may lead to a change in the participation of the patient (Flores 2020).

Education in the Doctor-Patient Relationship

There is not much literature using education to predict patient's medical experiences, but I argue that it is possible to use the status characteristic variable of education in the PLEASS 2007 to understand the dynamic of authority in the doctor/patient relationship. That being said, in the general study of race, gender, age, and education concordance (between doctors and patients) with health disparities, patients that had less social concordance had less positive perceptions of care (Thornton et al. 2011). This could tell us that patients who felt that they had less in common with their doctors in terms education might also feel less participatory or satisfied, which could lead to a decreased number of expectations and requests in their medical encounter (Thornton et al. 2011).

In the social sciences, education is often a predicting variable used in tandem with race or gender to understand an individual's social position in life. It is used here to understand as a proxy to understand how patients interact with authority figures and perceiving someone to have more authority than you might make you more intimidated by the encounter, such as having a lower race or gender status characteristic than your doctor might make the person more intimidated by the encounter.

Annette Lareau's study shows that there is variability in class where "cultural logic" is passed down from the parents to the children, and how children of different socioeconomic statuses are raised to interact with authority. Race played a less powerful role in this transmission

than class. Therefore, the current study helps illuminate our understanding of how social class and level of education could help shape one's expectations they hold about medical encounters, and how likely they are to request the experiences that they expect. The binary comparison between those who also have an advanced degree as their doctor does and those who do not will attempt to answer the question of how status characteristics influence how one interacts in their medical encounter. It is also acknowledged that there is different occupational prestige of different advanced degrees, such as the difference in occupational prestige between a college professor and a medical doctor, as well as that earning an advanced degree is rare educational occurrence, leaving a small sample size. Future research would be able to parse out these differences.

Moreover, Annette Lareau's study showed that working-class and poor parents expressed more fear of authority than middle class families. Working-class and poor families were less likely to include authority figures in their close friend groups, and they were more likely to experience uneasiness about authorities coming to take their children away where middle-class parents never mentioned similar fears of the "power of dominant institutions" (Lareau 2002:765).

She also discusses how middle class white and Black children are raised to encounter the world differently than children from families that are working class or poor. More specifically to the current research, she discusses how middle-class parents taught their children to interact with doctors and what to expect from medical encounters. How children of different socioeconomic classes learn to expect and request things from their doctors will help inform our understanding of whether the adults in this study requested their expectations in their medical encounters at different rates.

In the Lareau (2002:766) study, a middle-class Black mother prepared her son to “be thinking of questions you might want to ask the doctor... You can ask anything.” This preparation allowed her son a certain level of entitlement into his “right to speak up” in the medical encounter, as well as ask questions to clarify understandings, express likes and dislikes, and express what experiences and tests he wanted to the doctor. The mother also played a heavy role in the medical encounter in being truthful with the doctor about how often her son ate vegetables or received medications. This showed her son that authority could be trusted with accurate medical information. The researchers identified that the son was seen as a legitimate participant in the medical encounter.

On the contrary, a poor Black mother prepared for and participated in her son’s medical encounter in a different way. Although this mother was “normally boisterous and talkative at home”, was quiet in this medical encounter (Lareau 2002:769). She mumbled answers to the doctor and was unsure about when her son first learned to walk and what the date of her son’s last tetanus shot was. The son, used to receiving “directives” at home, posed none of his own questions and only answered the doctor’s questions. They were taught to “keep distance” from authority, practice a distrust of institutions, and resist authority in general (Lareau 2002: 773.) When answering a question too excitedly about a birthmark, his mother responded, “Will you cool out a minute?” before answering the doctor contrary to what her son had just answered. She also might have been dishonest about how often her son ate vegetables, as she said that he did, but the fieldworker had not seen any of the family’s children eat a yellow or green vegetable since the beginning of the study. This son learned that doctors are not to be trusted with accurate medical information, not to expect to participate with his own questions and expectations, and not attempt to find his own understandings, likes, and dislikes in the medical encounter.

This body of research supports my hypothesis that children who are raised in different socioeconomic households will interact with authority figures differently, growing into adults who are comfortable in the medical encounter based on their level of education. This effect of cultural transmission is also documented by Coleman, who uses the example, “In other words, the wealth of knowledge inside the head of a well-educated journalist or lawyer, reading his newspaper at the breakfast table, will be of no use to his son unless he puts down the paper and communicates with him properly – not just to tell him ‘facts’ but to support him as a human being.” (Coleman, 1988: 118). This is the human capital working to create social capital – who you know allows you to gain information from them that lets you move around the world differently. This capital that you receive and hold throughout your life will affect how you interact with experiences such as medical encounters, and how one chooses to expect or request medical experiences from their doctors.

Chapter 4: Methods

Research Questions

The aim of this study is to better understand what patients expect from their medical encounters, and if they request experiences from their physicians. I also aim to understand how status characteristics such as race, gender, and education influence these interactions. I use status characteristics theory to frame the understanding that based on one’s status, different outcomes can be expected.

The question I pose is “Do people with expectations about their medical encounter request them from their doctor, and how are those expectations affected by status characteristics?”

Hypotheses

I hypothesize that when the patient has a lower status characteristic identity than their doctor, they will be less likely to request medical experiences, such as a test, referral, or medication, from their doctor.

H₁: When the patient is non-white, and their doctor is white, the patient will request medical experiences from their doctor at lower rates than if they held the same racial status or if the patient was white and the doctor was non-white.

H₂: When the patient is a woman, and their doctor is a man, the patient will request medical experiences from her doctor at lower rates than if she held the same gender status or if the patient was a man and the doctor was a woman.

H₃: When the patient has less education as their doctor (i.e., the patient has no advanced degree), the patient will request medical experiences from their doctor at lower rates than if they held the same educational status.

Data

Data for this research are from the Patient's Likely Expectations and Satisfaction in care Survey (PLEASS 2007). These data were collected over an 11-month period in 2007 and 2008. Participants were interviewed in the waiting room before their encounter to gather their expectations about their visit with a questionnaire. Their medical encounter was then audio recorded to gather every word between the doctor and the patient. Finally, a post-encounter questionnaire was administered to gather patient's satisfaction and perceptions of their medical encounter. Patients were initially recruited in the waiting room while waiting to see their doctors and had to be 18 years old or older, speak and understand English, and have a doctor's appointment with their primary care provider (PCP). The data also include information from an interview of the doctors in a pre- and post-medical encounter questionnaire. The data set contains information on 224 participants from a large family medicine practice. The analyses I use are limited to 195 observations due to missing data on key variables.

Consent was obtained from doctors first before recruiting their patients, and patients were identified from the willing set of doctors. Patient's consent was obtained the day of their medical visit in the waiting room. The encounter itself was audiotaped and coded by trained coders using a coding scheme similar to the Roter Interaction Analysis System (RIAS) (Roter and Larson 2002).

In Table 1, the medications, tests, and referrals that could have been expected and/or requested are listed. Patients were asked: do you expect a medication? If they answered yes, the interviewer would ask about the specific medications, listed in Appendix C. The actual questionnaire is listed in Appendix D. If the patient was interested in a medication that was not listed, the interviewer noted it as "other". Other examples of requesting experiences are, "Can I have a medication to help me stop smoking?", "Can I have my blood pressure tested?", or "Can I be referred to a cardiologist?" In this analysis, I only selected those who had said "Yes, I expect that medication." Therefore, the data are not focused on those who said "no" or responded "no" to wanting a medication in general. This was repeated for both tests and referrals.

The reason that the population of patients who said "no" are left out of this analysis is that I am testing a theoretical difference between patients who said "yes", and have expectations about their medical encounter, and those who said "no". It does not make sense to include expectations that do not exist because the research question centers on the expectations that were already had and then testing if requests were made after that. Finally, I made three individual data sets for each type of experience, which represent each of the three experiences (outcomes) that I am examining. These experiences are medications, tests, or referrals.

Predicting Variables

The predictor variables are the status characteristic differences of race, gender, and education. In the original survey taken in the waiting room before the medical encounter, race was self-reported into the categories Hispanic White, Hispanic Black, American Indian, Black, White, and Other Race. In my analysis, I use a binary measure of race: White and Non-White, where Non-White is created from combining Black, Hispanic Black, American Indian, and Black, and Other Race patients. Those who self-identified as White or Hispanic White are coded as white. The creation of this specific white/nonwhite binary draws on census analyses from the Pew Research Center (Parker et al. 2015). They found that of mixed-race Hispanic adults, 30% believed that strangers on the street would believe they were white, and few said that they would be viewed as multiracial. Due to the design of this research employing the use of binary predicting variables, combining the racial categories into the white/non-white distinctions above is the most appropriate. The underlying nature of this study analyzes how people view each other and then how they act on those views, which then is supported by the Pew Research Center's conclusions that the racial category that was most chosen as "how others see me" was white, which supports combining white and Hispanic white, and on the other hand, non-white and Hispanic Black, as with Black, American Indian, and other race patients. Future research, however, should examine race as it was identified, rather than combining racial categories.

Gender is a binary measure of self-identifying as a woman compared to those who identify as a man. Education is measured by the question, "What is the highest level of education you have completed? (select one)" and was divided into six categories, 8th grade education or less, some high school, high school or GED equivalent, some college education, college graduate, or a graduate school graduate.

The variable for education is a binary variable of whether the participant (doctor or patient) had an advanced degree. For all medical doctors, they all had an advanced degree due to the requirement of their profession that to practice medicine they must hold a medical degree, among other requirements. There are not, however, any educational requirements in attending the doctor. In Appendix A, Table 1, I list the educational attainment of the patients in this study. However, the level of education is not the theoretical basis for this research, rather I choose to use it to capture occupational prestige, class, and type of social capital.

The patient that has less education than the doctor has social capital that may be different and less useful in the medical encounter, and therefore might feel a level of intimidation of requesting medical experiences due to their doctor having a different level of education (and occupational prestige) from themselves.

The status characteristic difference variables were created after the study concluded from these self-reported measures of the race, gender, and level of education of which the patient and doctor identified. In this analysis, if the patient had the higher status than their doctor, they were coded 2, or “patient higher status”. If the doctor had a higher status, they were coded as 1, or “doctor higher status”. If they had the same status, they were coded as 0, or “same status”. Examples of having higher status would be if they were a man rather than a woman, or if they were white rather than non-white. Lastly, patients will have a lower educational status than their doctor if they did not also have a M.D., like their doctor had.

To avoid the assumption that the patient having the higher status or the doctor having the higher status were mere opposites of each other and therefore would have equal and opposite effects, they were coded as 1 and 2, rather than 1 and -1.

Outcome Variable

The outcome variable in this research is requested experiences, or whether a medication, test, or referral was expected and requested. The coders recoded up to seven requests for medications, tests, and referrals. I recoded the data to indicate whether the specific expectations were requested.

Because this research question focuses on how requests are made for given expectations, I reshape the data to make expectations the unit of analysis rather than the patients, and therefore making it an expectation level data set. This would allow for the focus to be shifted away from patients expected medical experiences, and rather looking at the expectations that patients had, and seeing how race, gender, and education affect if the expectation was requested.

Further, “reshaping” is a feature in STATA that allows the user to transform their data set from “wide” to “long” format, or vice versa (Baum 2003). In this analysis, I reshaped the data set from wide, where the unit of analysis was the individual patient, to long, where the unit of analysis was the expectations that each individual had. Reshaping a data set is much like turning the data set on its side. This means that rather than a line in the data for each person in the data set, there is now a line for each expectation that any person ever had and verbalized. Reshaping collapses the data onto one of the data set’s defining indicators, which for this analysis is expectation (Baum 2003). In wide format, it is understood that each patient could have a range of expectations from 0 to 7 and those could be confirmed as a part of that individual’s data. The data set expands from 224 to 8,268 observations when reshaped to long format and it is understood that there are 8,268 expectations when expectations are the unit of analysis, or the observations. Patient identification and other characteristics are all still understood in this format,

with the only difference being that they are now each repeated if the patient had more than one expectation. Additionally, the predicting variable, requests, was also recoded.

The coders recorded up to seven requests for medications, tests, and referrals. Because my research question is if a patient ever requested an experience, and not when they requested it or what order they requested it in, I recoded and combined all the labels from each request 1 – 7. This resulted in a variable that showed if an experience was ever requested and what the request was for. I recoded the variable so that if they expected a certain medical experience, and then requested that specific experience, it was coded as 1. If they expected an experience and did not request it, the variable was coded as 0. This was the final iteration of the requested experiences variable and is the outcome variable in this research.

Control Variables

In this study, I control for marital status, income, visits to the doctor in the last 6 months, doctor's years practicing, and length of visit. Patients indicated their marital status on the pre-encounter questionnaire which included the options "Married", "Divorced/Separated", "Widowed", or "Never Married". I recode these options into a binary variable of married, which allowed for "Married" to reflect currently "Married", and the rest were combined to reflect "Unmarried". Income was recorded as "Less than \$10,000", "\$10,000 - \$20,000", "\$20,000 - \$30,000", "\$30,000 - \$40,000", or "More than \$40,000", and I recoded this variable to be a binary variable of "Less than \$40,000" or "More than \$40,000", to attempt to address the skewed nature of the data and more accurately reflect the median income of 2007, which was \$52,637 (Semega 2009). The mean income from 2007 exceeds the categories of the survey. Therefore, it is a limitation to use the income variable as a proxy for class or occupational prestige, and a limitation of the study in general. The reason that this variable was coded in this way is due to

the study in 2007 being a repeat of a study originally done of Veteran's Administration Hospital, where the incomes were usually lower than the general public's incomes. Although the PLEASS was gathered from the public, the scale was kept from the Veteran's Hospital, and therefore leaves out much income information that could have been used. I use the income variable as a control variable with the categories "More than \$40,000" and "Less than \$40,000" as an attempt to address this skew.

The variable for the number of the visits to the doctor is recorded by asking the question "How many times have you seen your primary care provider in the last 6 months?" and the responses ranged from 1 – 5, including "Don't Know". The "Don't Know" participants were dropped from the analysis because there were only 5 patients, or 39 total expectations. The length of visit was recorded in seconds. Transformed into minutes to be more understandable, the visits ranged from .93 minutes to 69.32 minutes. The last control variable was the doctor's years of practice, which ranged from 2 to 21 years of practice.

Descriptive variables

To best understand this sample, Table 1 shows additional variables that are not included in the analysis but help understand the characteristics behind the doctors and patients in these medical encounters. doctor's age, which ranged from 33 years old to 54 years old, doctor's gender, where 40.2% were women and 59.8% were men. Patient's age ranged from 31 years old to 83 years old. Future research should analyze the effects of age on the comfortability in having expectations about your medical encounter and the rate of subsequent requests made by the patient, as this could be a confounding variable that may influence patients of different races, genders, and levels of education differently. Older patients may be more comfortable in voicing

requests because they may be more likely to have attended doctor's appointments more in their longer lifetimes.

Analysis

The analysis that I chose was a logistic regression with the outcome being that an expectation was requested. I chose a logistic regression because of the discrete nature of the outcome variable, whether there was a requested medical experience. This is a 0 / 1 variable.

There will be five models in this analysis for each type of medical experience. In Model 1, the predicting variable is the status characteristic race, where I analyze status characteristics predicting the outcome, which is requested experiences. Each model has the outcome variable of requested experiences. In Model 2, the predicting variable is the status characteristic gender, and in Model 3, the predicting variable is status characteristic level of education. In Model 4, I will combine all the status characteristics into the model, and in Model 5, I keep all the status characteristics and add the controls of marital status, income, visits to the doctor in the last 6 months, doctor's years practicing, and length of visit.

$$\text{Models 1 - 3} = \text{Logit}(p) = \ln\left(\frac{p}{1-p}\right) = B_0 + B_1X$$

I use the above logistic regression in answering my research question. Here, "p" is the probability that an expected medical experience is requested. "p/(1-p)" is the odds ratio of this event, and in full, "ln[p/(1-p)]" is the log odd or the logit(p).

In Model 1, B_1X is the status characteristic race predicting requested medical experiences. In Model 2, B_1X is the status characteristic gender predicting requested medical experience, and in Model 3, B_1X is the status characteristic education predicting requested medical experience.

$$\text{Model 4: Logit}(p) = \ln\left(\frac{p}{1-p}\right) = B_0 + B_1X + B_2X + B_3X$$

In Model 4, I combine all the status characteristics into the model. Here, B_1X is race status characteristics, B_2X is gender status characteristics, and B_3X is education status characteristics.

$$\text{Model 5: Logit}(p) = \ln\left(\frac{p}{1-p}\right) = B_0 + B_1X + B_2X + B_3X + B_4X + B_5X + B_6X + B_7X + B_8X$$

In Model 5, I combine all the status characteristics and controls into the model. Here, B_1X is race status characteristics, B_2X is gender status characteristics, and B_3X is education status characteristics. For controls, B_4X is marital status, B_5X is income, B_6X is visits to the doctor in the last 6 months, B_7X is doctor's years practicing, and B_8X is length of visit in seconds.

I cluster around patient ID. Clustering by ID means that we acknowledge that each expectation is not independent from any other expectation, because sometimes patients had more than one expectation, and if multiple expectations are made by one person, they are similar in some ways (Williams 2000). Expectations and requests are nested within each patient. I used the "cluster" option in STATA to adjust the standard errors that could be biased due to the non-independent observations.

As previously mentioned, I created three data sets so that one data set would only be comprised of medication expectations, one with test expectations, and one with referral expectations. Each of these five models were run on each data set to create Tables 3 – 5 in Appendix A.

Chapter 5: Results

Descriptive Statistics of the Patient Level Data Set

Table 1 shows the descriptive statistics of the patient level data set that was obtained in 2007. There were 224 total patients in this study, and this research is limited to 195 patients with

non-missing data for the education and race variables, as well as 194 patients with non-missing data for the income and married variables. When patients refused to certain questions, the responses were left missing and were dropped from my analysis on those certain questions. I discuss the details of the status characteristic variables of race, gender, and education below, as well as the control variables used in this analysis, patient age, patient income, as well as the number of primary care physician appointments the patient has had in the last 6 months, the doctor's years practicing, and the length of the visit in seconds.

I note in this section the full characteristics and ranges of the "patient race" variable, as well as "patient education", and "patient income" variables. In the analytical "expectation level data set", race, education, and income are a few of the variables that are binary variables. I believe it is still important to understand the full range of experiences held in these variables.

Of the 195 patients who recorded their race in this study, 1% identified as Hispanic-White, .5% identified as Hispanic-Black, 1.5% identified as American Indian, 29.7% identified as Black, 63.1% identified as White, 3.1% identified as Other Race, and about 1% refused to answer.

In terms of patient education, 5.6% of the 195 patients who identified their level of education for the study said they had an 8th grade education or less, 12.3% identified as having some high school education, 21.5% identified as having graduated from high school or had obtained their GED, 36.4% of patients had some college education, 13.3% had graduated college, and 10.8% had graduated with an advanced degree.

For patient income, 194 patients disclosed their income and 13.4% of patients reported an income of less than \$10,000, 24.7% of patients reported an income between \$10,000 and \$20,000, 18% of patients reported an income between \$20,000 and \$30,000, 11.3% of patients

reported an income between \$30,000 and \$40,000, and 19.1% of patients reported an income above \$40,000.

[INSERT TABLE 1]

Descriptive Statistics of the Expectation Level Data Set

Table 2 shows the descriptive statistics of the expectation level data set that I created for this analysis. It shows that there were 8268 observations in the data set, that was reduced to 7371 for the patient education variable, the expectations and requests variable, and the married variable. There were 7215 observations when asking exactly how many PCP visits the patient had in the last 6 months.

In terms of race, 56.1% of the expectations came from patients who were white and 43.9% from patients who were non-white. When there were expectations, 80.2% of expectations were had with doctors who were white and 19.8% non-white, and 58% of doctor-patient pairs of the were the same race, whereas 9% of pairs had a white patient and a non-white doctor, and 33% of pairs had a white doctor and a non-white patient.

In terms of gender, 53.3% of the expectations came from patients who were women and 46.7% of the patients who were men, and 40.6% of expectations were had with doctors who were women and 59.4% were had with doctors who were men. Overall, 51.4% of doctor-patient pairs held the same gender, 17.9% of expectations were had when the patients were men and their doctor was a woman, and 30.7% of expectations were had when the patients were women, and their doctors were men. All doctors in the study had completed medical school. In the analytical data set, 10.05% of patients who had expectations had a similar education to their doctor (i.e., an advanced degree), whereas 89.95% of them had less education than their doctor.

The average age of the patients who had expectations was 60, whereas the average age of the doctors seeing them was 40. Only 1.3% of all expectations resulted in requests. In terms of marital status, 68.3% of patients were currently married. The average number of visits in the last 6 months ranged from 1 to 5, with 36.8% of patients having 1 visit with their PCP in the last 6 months, 40.5% having 2, 9.7% having 3, 7% having 4, and 5.9% having 5 visits in the last 6 months. The years of the doctor in practice ranged from 2 to 21 years, averaging at 8 years. The length of visit in seconds ranged from 356 to 4159. This is the equivalent to 5.93 minutes to 69.32 minutes. The average length of visit was 1603.642 seconds or 26.72 minutes.

[INSERT TABLE 2]

Regression Results

Medications

For the regression results, Table 3 shows requested medications, Table 4 shows requested tests, and Table 5 shows requested referrals. I also want to note that I have added a significance level at the .1 level in each of the tables, which is common in the use of this data set in medical sociology, and in these regressions, the reference group is patients holding the same status as their doctor (Peck and Conner 2011). More specifically, Table 3 shows the status characteristics of predicting requested medications that had been originally expected. While the results do not yield high amounts of significance, it is noteworthy that when a non-white patient has a white doctor, there is a .01 decreased odds of requesting a medication from their doctor when compared to having the same racial status as their doctor significant at the $p < .1$ level, (Model 3.1) and when controlling for marital status, income, number of visits in the last 6 months, years of doctor's practice, and length of the visit in seconds (Model 3.5), the significance increases to $p < .05$. This upholds H_1 that patients who held a lower racial status than their doctor might be

less likely to request a medication. Therefore, this shows that having the same racial status between patient and doctor could result in the patient being more likely to request medications in their doctor's visit than doctor-patient dyads that have different races.

Additionally, when the doctor is a woman and the patient is a man, it is significant with a .01 decreased log odd of requesting a medication from their doctor while holding the controls constant (Model 3.2). This was significant at the $p < .05$ level. This is unsupported by H_2 that patients with a lower gender status characteristic identity would be less likely to request medications from their doctor, but this is only significant when gender is the only variable in the model. When the controls are added, the trend remains but the significance goes away.

Contrarily, when the doctor is a man and the patient is a woman, it is significant at the $p < .1$ level that patients could expect .01 increased log odd of requesting an expected medication, when all status characteristics and controls are held constant (Model 3.5). This also does not support my hypothesis, H_2 , that patients with a lower gender status characteristic identity would request their expected medical experiences less frequently

For the education status characteristic, none of the models were significant. However, when all the controls were added, patients could expect a negative log odd of less than 0.00 to request expected medications when the patient did not have an advanced degree, as opposed to when both the doctor and the patient both had the same status, or both had advanced degrees. This supports my hypothesis, H_3 , that when the patient has less education than their doctor, they will be less likely to request a medication.

None of the controls held significance in the model except for "Doctor's Years of Practice", which showed that it could be expected that for every increase in doctor's years of

practice, there was a decreased log odd of less than 0.00 of the patients requesting an expected medication. This was significant at the $p < .01$ level.

[INSERT TABLE 3]

Tests

Table 4 shows status characteristics predicting requested tests. Only two of the controls in this model showed significance, the number of visits in the last 6 months and the length of the visit in seconds. Number of visits in the last 6 months showed a decreased log odd of less than 0.00 for requesting expected tests for every increase in medical visits (Model 4.5). This was significant at the $p < .1$ level. Additionally, the length of visit in seconds showed an increased log odd of less than 0.00 for requesting expected tests for each additional second. This was significant at the $p < .05$ level (Model 4.5).

The status characteristics themselves, however, did not show significance. For both racial categories describing the doctor-patient racial dyads, they both showed that having a different race than your doctor would result in having a decreased log odd of requesting an expected test, regardless of the status characteristic being higher or lower (Model 4.1), and this model partially supports my hypothesis in these trends. Additionally, for both gender categories, they both showed that having a different gender than your doctor would result in having a decreased log odd of requesting an expected test (Model 4.2), and this model also partially supports my hypothesis with these trends. For education, however, having a mismatched amount of education compared to your doctor, or the patient not having an advanced degree, resulted in an increased log odd of requesting an expected test (Model 4.3), which is unsupported by my hypothesis H_3 .

[INSERT TABLE 4]

Referrals

Table 5 shows the status characteristics and other variables predicting requested referrals. Only one variable showed significance, and that was length of the medical visit in seconds. For each additional second in the medical visit, the patient had an increased log odd of less than 0.00 in requesting an expected referral. This was significant at the $p < .1$ level.

For the status characteristic race, there was no significance in status characteristics predicting requested referrals. When it was the only variable in the model (5.1), my hypothesis is supported by the trend that if the patient had the lower status in the encounter, they were less likely to request than if they had the same race, and this held true for when all the status characteristics were built into the model, (Model 5.4), as well as when the controls were added (Model 5.5). When the patient was white and the doctor was non-white, the trend of requesting was no different than if the doctor and patient had the same race, except for when all the controls were added, where the white patients were less likely to request their referrals than if they were the same race as their doctor, which isn't supported by my hypothesis, H_1 . None of this, however, was statistically significant.

For the status characteristic gender, there was no significance, but the trend remained that having a different gender identity than their doctor resulted in a decreased log odd of requesting an expected referral (Model 5.2), partially supporting my hypothesis, H_2 .

For the status characteristic education, there was no significance in the status characteristic predicting requested referrals. When all controls were added into the model (Model 5.5), there was a decreased log odd of requesting a referral when the patient did not have an advanced degree. This supports my hypothesis H_3 , however without significance. When all the controls were removed to the model (Model 5.1), however, the trend reversed and there was a no

difference from the asymmetrical levels of education compared to when the doctor and patient both had advanced degrees, however non-significant.

[INSERT TABLE 5]

Figure 1 is a combined figure of all the bar graphs showing the status characteristic differences of race, gender, and education on requested medications, tests, and referrals. Vertically, the graphs are organized by status characteristic, whereas they are horizontally organized by medications, tests, and referrals. Per each figure, the Y-axis shows predicted probabilities ranging from 0 to .02 and the X-Axis shows the status characteristic differences.

Figure 1a, or the status characteristics predicting requested medications, shows that when both patient and doctor are white or are both non-white, the patient has the highest predicted probability of making a request for a medication. Additionally, when the patient was white and their doctor was non-white, they had a higher predicted probability of requesting medications from their doctor than when their doctor was white, and the patient was non-white. This supported my hypothesis.

Figure 1b shows the status characteristic of gender predicting requested medications and shows that the doctor being a man and the patient being a woman led to the highest predicted probability of requesting a medication. Second to that, when both the doctor and the patient had the same gender, they had the second highest predicted probability of requesting a medication, followed by when the doctor was a woman and the patient was a man, he had the lowest predicted probability of requesting a medication. This did not support my hypothesis.

Additionally, in Figure 1c, or the status characteristic difference of education on predicting requested medications when the patient does not have an advanced degree, the patient

has a lower predicted probability of making a request for a medication. This supports my hypothesis.

Figure 2a, or the status characteristic of race predicting requested tests, shows that when the patient is white (or “Patient Higher”) versus having the same status as their doctor or when their doctor has the higher status, they have the lowest predicted probability of requesting a test. When the doctor and patient have the same racial status, they have a higher predicted probability of requesting a test, and when the doctor has a higher racial status than the patient, or is white when the patient is nonwhite, the patient has the highest predicted probability of requesting a test. This does not support my hypothesis.

Figure 2b, or the status characteristic of gender on predicting requested tests, shows that when both the doctor and the patient are the same gender, they have the highest predicted probability of making a request for a test. When the doctor is a man and the patient is a woman, this group has the lowest predicted probability of requesting a test. When the patient is a man and the doctor is a woman, however, there is a lower probability than when they have the same status but higher than when the doctor has a higher gender status. This supports my hypothesis.

Finally, in Figure 2c, or status characteristic of education predicting tests, as opposed to medications, when the patient is the same status as their doctor, they have a lower predicted probability of requesting a test than when the doctor has an advanced degree, and the patient does not. This does not support my hypothesis.

Figure 3a shows the status characteristic of race predicting requested referrals, and that when requesting referrals, having the same race leads to the highest probability of requesting a referral. This is followed then by when the patient is white and their doctor is non-white, and

lastly when the doctor is white and the patient is non-white, when there is the lowest predicted probability of requesting a referral. This supports my hypothesis.

In Figure 3b shows the status characteristic of gender predicting requested referrals, holding the same status results in having the highest predicted probability of requesting an expected referral, followed by when the doctor is a man and the patient is a woman, and then when the patient is a man, and the doctor is a woman. This is not supported by my hypothesis.

Figure 3c shows that when the doctor has a higher status than their patient, the patient has a lower predicted probability of requesting a referral. If they both have advanced degrees, however, the patient has a higher predicted probability of requesting a referral. This is the same trend as medications, and the opposite trend of tests, and supports my hypothesis. The same was also true for race, where medications and referrals held similar trends while different than those for tests. For gender, all three medical experiences showed different trends.

I hypothesized that when the patient has a lower status characteristic identity than their doctor, they will be less likely to request medical experiences, such as a test, referral, or medication, from their doctor. Patients with a lower racial or educational status characteristic were less likely to request medications and referrals, whereas patients with a lower gender status characteristic were less likely to request tests from their doctor.

[INSERT FIGURE 1]

Chapter 6: Discussion

In general, the trends remained steady across expected medications, and referrals, and varied for tests. For race, holding the same status resulted in a higher predicted probability of requesting expected medications or referrals, whereas for tests, doctor higher status had a higher predicted probability of requesting a test (Figure 1). For gender, the highest predicted

probability of requesting a test or referral also came when the patient and doctor had the same gender, whereas for medications, if the doctor was a man and the patient was a woman, she was more likely to request than if the statuses were reversed. In levels of education, the patient also having an advanced degree also resulted in a higher predicted probability of requesting medications and referrals, but not tests.

In conclusion, there are small levels of significance where a patient's status characteristics influence how they request experiences from their doctor. Requesting expected medications had the strongest connection. This may be because our media is loaded (a multi-billion dollar enterprise) with direct-to-consumer advertising, which shows commercials and pushes the narrative of "Ask your doctor if this medication is right for you" (Becker and Midoun 2016). Additionally, medications may feel like the fastest way to solve their medical problem, making them more likely to expect and/or request a medication.

In conclusion, I believe that the low rates of statistical significance in expectations predicting requests could arise for three reasons. First, the doctor may change the patient's mind from when they first expected to have an experience in the first questionnaire; during the medical encounter, they may decide that they do not need it anymore. Second, the doctor may offer the experience before the patient can ask for it. Third, they may be too afraid to ask for their expected experience. This may be because of status characteristics in some capacity, but this research does not show strong evidence in this direction.

It also should be noted that the frequency that patients requested items that they expected in the pre-encounter survey is surprisingly low, only 1.3% of all expectations. While this research hypothesized that the discrepancy between expectations and requests would be due to status characteristic differences, that does not seem to be the case. A larger data set might

provide more significance and explanations for this situation, but overall, there is something happening that is not being captured by these data sets and models. I strongly believe that a next step forward in expanding the results of this research is to analyze the conversations between the doctors and the patients in the PLEASS (2007) and understand the conversation and nuances in the discussion of the patient's needs. Knowing, rather than speculating what the doctor's suggested or denied and how the patient reacted is an important part of understanding why the patient did or did not request an expectation that they held.

Limitations

Limitations for this study are that while I did cluster around Patient ID in the logistic regression, I could have also clustered around Doctor ID as well. Each expectation was made within a patient, and each patient saw a doctor, and I only clustered for one of these levels. Clustering at the patient level did not appear to change the results as significantly as I would have anticipated, as I ran the regressions with and without the clustering (not shown).

Additionally, the variables in this research are centered around whether a patient requests an expectation that they had expressed during the pre-encounter survey, but they do not elaborate on any conversation that the doctor, patient, or any family member might have had during the encounter. Side conversations or outside influences might change how and if the patient requested a certain medical experience. We also cannot tell if a doctor behaved in such a way that recommended or dissuaded certain treatments to the patient, which would then influence the patient to request or not request a medical experience. The variables used in this research work to understand how expectations predict requests on an individual level while holding the status characteristics, education, gender, and race constant.

An additional limitation of this study is the internal validity of the study. The expectations studied here are only those that were verbalized both during a pre-encounter survey and verbalized in the medical encounter to the doctor. These cannot encompass all expectations, only those verbalized and confirmed within the pre-encounter survey. Assuming that there would not be barriers to the patient verbalizing any expectations in their survey to the researcher, outside of merely forgetting and re-remembering when with the doctor, or not thinking something was important to them but later realizing it is, there are many more situations in which a patient might have an expectation that does not end up being verbalized to their doctor. This could include patients who have done previous research about their symptoms only to be told that the doctor is able to rule out that condition and therefore the patient chooses not to further request a certain experience.

Additionally, a limitation to this research is that there is no analytical difference between the different medications, tests, or referrals being tested when there are theoretical differences in the ways that patients may expect and request them. For example, the way that patients expect, and request pain medication might have theoretical and practical differences from the way that a patient might expect and request an asthma medication, or on the other hand, a test for a test in general (McKinlay et al. 2014).

A final limitation to this study is that as indicated in Figure 1, the confidence intervals in each bar graph in each figure overlap each other. This simple visual is a reminder that these results are not statistically significant from one another, which is important in considering the generalizability of these results.

Future Research

Suggestions for future research include making hypotheses about specific experiences and how they are expected and requested in the medical encounter. Since this study concludes that there is a trend in significance in requests for medications, I suggest future research analyze how different medications, tests, or referrals are made and how theory may be able to explain these findings. This is also supported by the trends shown across status characteristics. In terms of race and education, both medications and referrals held similar trends, while tests showed different trends. More research should analyze the differences that may create tests to be requested differently than medications and referrals, especially in terms of status characteristics.

I believe that a more thorough understanding of these trends could be explained by taking a deeper look at the encounters themselves, such as looking directly at the interview transcripts to understand a dynamic between the doctor and patient that this research may not be able to reach. For example, there may be some individual differences between patients that may lead the patients in different directions based on how their doctor is communicating with them, considering the stress levels a patient might be enduring on any day, they might perceive their doctor's intentions differently. Whereas one patient may comply when their doctor dissuades an expectation or concern, other patients may introduce a level of stubbornness or entitlement that causes them to voice their requests after being dissuaded when other patients may not.

I also believe that in future studies, type of care (Physician-centered Care versus Patient-Centered Care) should be held constant as well as the ratio for how much the doctor is talking in comparison to the patient. Both aspects appear in the PLEASS (2007) and have growing literature explaining that these can influence how patients are willing to participate in their

medical encounter and may have an influence on how patients decide to voice requests after having expectations.

Additional statistical analysis could also be done to further modernize this study. One example would be to statistically analyze the term “gendered racism” most often experienced by Black women in a medical environment (Rosenthal and Lobel 2011). This could be done either by analyzing Black women directly if this study is expanded from its binary variables and into using a full range of race categories or done with this data set by analyzing non-white women patients with white men doctors. Expanding the research’s resources might also allow for a better understanding of all racial and ethnic categories. This research combined races into white/nonwhite, and it would be important to understand how self-identified racial/ethnic categories affect medical interactions. A second attempt at a deeper form of intersectionality would be to recreate this study and collect gender and sexual identities to better understand how those aspects of one’s identity influences how they interact with their medical encounters.

Finally, a hierarchical level modeling approach might affect the results with the statistical acknowledgement that each expectation was grouped by being verbalized by a patient, and each patient was grouped by the doctor that they had, therefore being able to better understand the relationship between the expectations, the patients, and how they all fit into a bigger picture.

Chapter 7: Conclusion

In conclusion, my hypotheses were partially supported. Hypothesis 1 was about race and requesting medical experiences. My hypothesis was that when the patient is non-white, and their doctor is white they will request medical experiences from their doctor at lower rates than if they held the same racial status or if the patient had higher racial status. This hypothesis was partially

supported because it only held true with medications and referrals but not for tests. Tests had the highest rate of being requested when the doctor was white, and the patient was non-white.

Hypotheses 2 was about gender and requesting medical experiences. My hypothesis was that when the patient is a woman, and their doctor is a man she will request medical experiences from her doctor at lower rates than if she held the same gender status or if the patient had the higher gender status. This hypothesis was only supported by tests.

Hypothesis 3 was about education and requesting medical experiences. My hypothesis was that when the patient has less education as their doctor, they will request medical experiences from their doctor at lower rates than if they held the same educational status. It is true that for medications and referrals, those with less education than their doctor had a lower predicted probability of requesting them, but this was not significant for medications, tests, or referrals. Therefore, this was partially supported.

Implications

Implications of this research include having a fuller understanding of how our personal interactions and characteristics influence how we move through the world, including how our medical encounters go. The research on how medical expectations get requested is crucial in understanding a patient's comfort and security in the medical encounter, regardless of their race, gender, or level of education, and ensuring that status characteristics and even power dynamics still allow for a comfortable setting where women can request medications, tests, or referrals from their men doctors, as well as non-white patients still feel like they will be heard and validated by requesting things from their doctors. In sum, this research is important in ensuring that the encounter is not intimidating because of the doctor's status and therefore the patients do

not feel like they cannot talk openly about their expectations and request specific experiences from their doctor.

If anything, understanding that race, gender, and level of education does not have a strong status characteristic difference in how people request medical experiences is important to finding the right solutions in making the medical encounter safe. Building upon this research will further help doctors and medical systems ensure that power dynamics and status characteristics do not prevent patients from feeling welcomed, safe, and validated in their appointment.

This research shows that most expectations do not get requested, but fortunately, that does not seem to be caused by differences in the status characteristics between the doctors and the patients. This is a positive contribution in the literature and more can be done to understand the different rates in expecting versus requesting and how to have the most successful medical experience.

References

- Artiga, Samantha, and Elizabeth Hinton. 2018. "Beyond Health Care: The Role of Social Determinants in Promoting Health and Health Equity." 13.
- Baum, Christopher F. 2003. "A Review of Stata 8.1 and Its Time Series Capabilities." *International Journal of Forecasting* 20.
- Becker, Sara J., and Miriam M. Midoun. 2016. "Effects of Direct-to-Consumer Advertising on Patient Prescription Requests and Physician Prescribing: A Systematic Review of Psychiatry-Relevant Studies." *The Journal of Clinical Psychiatry* 77(10):e1293–1300. doi: 10.4088/JCP.15r10325.
- Beisecker, Analee, and Thomas Beisecker. 2009. "Using Metaphors to Characterize Doctor–Patient Relationships: Paternalism Versus Consumerism." *Health Communication* 5:41–58. doi: 10.1207/s15327027hc0501_3.
- Berger, Joseph. 1958. "Relations Between Performance, Rewards and Action-Opportunities in Small Groups."
- Berger, Joseph, Bernard P. Cohen, and Morris Zelditch. 1972. "Status Characteristics and Social Interaction." *American Sociological Review* 37(3):241–55. doi: 10.2307/2093465.
- Berger, Joseph, Susan J. Rosenholtz, and Morris Zelditch. 1980. "Status Organizing Processes." *Annual Review of Sociology* 6(1):479–508. doi: 10.1146/annurev.so.06.080180.002403.
- Berger, Joseph, and David G. Wagner. 2016. "Expectation States Theory." Pp. 1–5 in *The Blackwell Encyclopedia of Sociology*. American Cancer Society.
- Bertakis, K. D., and R. Azari. 2011. "Patient-Centered Care Is Associated with Decreased Health Care Utilization." *The Journal of the American Board of Family Medicine* 24(3):229–39. doi: 10.3122/jabfm.2011.03.100170.
- Bertakis, Klea D. 2009. "The Influence of Gender on the Doctor–Patient Interaction." *Patient Education and Counseling* 76(3):356–60. doi: 10.1016/j.pec.2009.07.022.
- Coleman, James S. (1988), 'Social Capital in the Creation of Human Capital', *American Journal of Sociology*, Vol. 94, Supplement: Organizations and Institutions: Sociological and Economic Approaches to the Analysis of Social Structure, pp. S95-S120.
- Epstein, Ronald M., Peter Franks, Kevin Fiscella, Cleveland G. Shields, Sean C. Meldrum, Richard L. Kravitz, and Paul R. Duberstein. 2005. "Measuring Patient-Centered Communication in Patient–Physician Consultations: Theoretical and Practical Issues." *Social Science & Medicine* 61(7):1516–28. doi: 10.1016/j.socscimed.2005.02.001.
- Flores, Glenda M. 2020. "Latina Physicians as 'Essential' Workers." *Contexts* 19(4):62–64. doi: 10.1177/1536504220977938.

- Lareau, Annette. 2002. "Invisible Inequality: Social Class and Childrearing in Black Families and White Families." *American Sociological Review* 67(5):747. doi: 10.2307/3088916.
- McCormack, Lauren A., Katherine Treiman, Douglas Rupert, Pamela Williams-Piehot, Eric Nadler, Neeraj K. Arora, William Lawrence, and Richard L. Street. 2011. "Measuring Patient-Centered Communication in Cancer Care: A Literature Review and the Development of a Systematic Approach." *Social Science & Medicine* 72(7):1085–95. doi: 10.1016/j.socscimed.2011.01.020.
- McKinlay, John B., Felicia Trachtenberg, Lisa D. Marceau, Jeffrey N. Katz, and Michael A. Fischer. 2014. "Effects of Patient Medication Requests on Physician Prescribing Behavior: Results of a Factorial Experiment." *Medical Care* 52(4):294–99. doi: 10.1097/MLR.000000000000096.
- Parker, K., J. Horowitz, R. Morin, and M. Lopez. 2015. "Hispanic Racial Identity: MULTIDIMENSIONAL Issue FOR LATINOS."
- Peck, B. Mitchell, and Sonya Conner. 2011. "Talking with Me or Talking at Me? The Impact of Status Characteristics on Doctor-Patient Interaction." *Sociological Perspectives* 54(4):547–67. doi: 10.1525/sop.2011.54.4.547.
- Peck, B. Mitchell, and Meredith Denney. 2012. "Disparities in the Conduct of the Medical Encounter: The Effects of Physician and Patient Race and Gender." *SAGE Open* 2(3):2158244012459193. doi: 10.1177/2158244012459193.
- Poussaint, Alvin F., and Amy Alexander. 2001. *Lay My Burden Down: Suicide and the Mental Health Crisis among African-Americans*. Boston: Beacon Press.
- Rodriguez-Osorio, Carlos A., and Guillermo Dominguez-Cherit. 2008. "Medical Decision Making: Paternalism versus Patient-Centered (Autonomous) Care." *Current Opinion in Critical Care* 14(6):708–13. doi: 10.1097/MCC.0b013e328315a611.
- Rosenthal, Lisa, and Marci Lobel. 2011. "Explaining Racial Disparities in Adverse Birth Outcomes: Unique Sources of Stress for Black American Women." *Social Science & Medicine* 72(6):977–83. doi: 10.1016/j.socscimed.2011.01.013.
- Roter, Debra, and Susan Larson. 2002. "The Roter Interaction Analysis System (RIAS): Utility and Reliability for Analysis of Medical Interactions." *Patient Education and Counseling* 9.
- Safran, Dana Gelb, Deborah A. Taira, William H. Rogers, Mark Kosinski, John E. Ware, and Alvin R. Tarlov. 1998. "Linking Primary Care Performance to Outcomes of Care." 8.
- Schinkel, Sanne, Barbara C. Schouten, Richard L. Street, Bas van den Putte, and Julia C. M. van Weert. 2016. "Enhancing Health Communication Outcomes Among Ethnic Minority Patients: The Effects of the Match Between Participation Preferences and Perceptions and Doctor–Patient Concordance." *Journal of Health Communication* 21(12):1251–59. doi: 10.1080/10810730.2016.1240269.

- Semega, Jessica. 2009. "Median Household Income for States: 2007 and 2008 American Community Surveys." 4.
- Smith, Sandra Susan. 2010. "Race and Trust." *Annual Review of Sociology* 36(1):453–75. doi: 10.1146/annurev.soc.012809.102526.
- Suite, Derek H., Robert La Brill, Anelle Primm, and Phyllis Harrison-Ross. 2007. "Beyond Misdiagnosis, Misunderstanding and Mistrust: Relevance of the Historical Perspective in the Medical and Mental Health Treatment of People of Color." *Journal of the National Medical Association* 99(8):879–85.
- Thornton, Rachel L. Johnson, Neil R. Powe, Debra Roter, and Lisa A. Cooper. 2011. "Patient–Physician Social Concordance, Medical Visit Communication and Patients' Perceptions of Health Care Quality." *Patient Education and Counseling* 85(3):e201–8. doi: 10.1016/j.pec.2011.07.015.
- Valeri, L., J. T. Chen, X. Garcia-Albeniz, N. Krieger, T. J. VanderWeele, and B. A. Coull. 2016. "The Role of Stage at Diagnosis in Colorectal Cancer Black-White Survival Disparities: A Counterfactual Causal Inference Approach." *Cancer Epidemiology Biomarkers & Prevention* 25(1):83–89. doi: 10.1158/1055-9965.EPI-15-0456.
- Weiss, G. B. 1985. "Paternalism Modernised." *Journal of Medical Ethics* 11(4):184–87. doi: 10.1136/jme.11.4.184.
- Williams, Rick L. 2000. "A Note on Robust Variance Estimation for Cluster-Correlated Data." *Biometrics* 56(2):645–46. doi: <https://doi.org/10.1111/j.0006-341X.2000.00645.x>.
- Wilson, Yolonda, Amina White, Akilah Jefferson, and Marion Danis. 2019. "Intersectionality in Clinical Medicine: The Need for a Conceptual Framework." *The American Journal of Bioethics* 19:8–19. doi: 10.1080/15265161.2018.1557275.

Appendix A: Tables

Table 1. Descriptive Statistics – Patient Level Data

Variable	Obs.	Mean	Std. Dev.	Min	Max
Status Characteristic Race					
Same Status	224	.58	.495	0	1
Patient Higher Status	224	.085	.279	0	1
Doctor Higher Status	224	.335	.473	0	1
Status Characteristic Gender					
Same Status	224	.509	.501	0	1
Patient Higher Status	224	.183	.388	0	1
Doctor Higher Status	224	.308	.463	0	1
Status Characteristic Education					
Same Status	195	.108	.311	0	1
Doctor Higher Status	195	.892	.311	0	1
Patient Race					
Hispanic White	195	.01	.101	0	1
Hispanic Black	195	.005	.072	0	1
American Indian	195	.015	.123	0	1
Black	195	.297	.458	0	1
White	195	.631	.484	0	1
Other	195	.031	.173	0	1
Refused	195	.01	.101	0	1
Binary Measure Patient Race					
Nonwhite	224	.442	.498	0	1
White	224	.558	.498	0	1
Binary Measure Patient Gender					
Woman	224	.527	.5	0	1
Man	224	.473	.5	0	1
Binary Measure Patient Education					
8th grade or less	195	.056	.231	0	1
Some High School	195	.123	.329	0	1
High School or GED	195	.215	.412	0	1
Some College	195	.364	.482	0	1
College Grad	195	.133	.341	0	1
Graduate School	195	.108	.311	0	1
Binary Measure Patient Age					
	224	60.411	11.826	31	83
Binary Measure Doctor Race					
Nonwhite	224	.192	.395	0	1
White	224	.808	.395	0	1
Binary Measure Doctor Gender					
Woman	224	.402	.491	0	1
Man	224	.598	.491	0	1
Binary Measure Doctor Education					
Doctor Education	224	.7	.0	7	7
Binary Measure Doctor Age					
Doctor Age	224	40.295	5.181	33	54
Binary Measure Patient Married					
Patient Married	194	.68	.468	0	1
Binary Measure Patient Income					
Patient Income	194	4.103	3.154	1	12
Binary Measure Income					
<10k	194	.134	.342	0	1
10-20k	194	.247	.433	0	1
20-30k	194	.18	.386	0	1
30-40k	194	.113	.318	0	1
40k+	194	.191	.394	0	1
Number of PCP Visits in last 6 months?					
1	191	.361	.482	0	1
2	191	.414	.494	0	1
3	191	.094	.293	0	1
4	191	.068	.253	0	1
5	191	.063	.243	0	1
Binary Measure Doctor's Years Practicing					
Doctor's Years Practicing	224	7.96	5.258	2	21
Binary Measure Length of Visit in Seconds					
Length of Visit in Seconds	224	1604.246	683.136	356	4159

Table 2: Descriptive Statistics – Expectation Level Data

Variable	Obs.	Mean	Std. Dev.	Min	Max
Status Characteristic Race					
Same Status	8268	.58	.494	0	1
Patient Higher Status	8268	.09	.286	0	1
Doctor Higher Status	8268	.33	.47	0	1
Status Characteristic Gender					
Same Status	8268	.514	.5	0	1
Patient Higher Status	8268	.179	.384	0	1
Doctor Higher Status	8268	.307	.461	0	1
Status Characteristic Education					
Same Status	7371	.101	.301	0	1
Doctor Higher Status	7371	.899	.301	0	1
Patient Race					
Hispanic White	7371	.011	.102	0	1
Hispanic Black	7371	.005	.073	0	1
American Indian	7371	.016	.125	0	1
Black	7371	.307	.461	0	1
White	7371	.619	.486	0	1
Other	7371	.032	.175	0	1
Refused	7371	.011	.102	0	1
Binary Measure Patient Race					
Nonwhite	8268	.439	.496	0	1
White	8268	.561	.496	0	1
Patient Gender					
Woman	8268	.533	.499	0	1
Man	8268	.467	.499	0	1
Patient Education					
8th grade or less	7371	.058	.234	0	1
Some High School	7371	.122	.327	0	1
High School or GED	7371	.222	.416	0	1
Some College	7371	.36	.48	0	1
College Grad	7371	.138	.344	0	1
Graduate School	7371	.101	.301	0	1
Patient Age	8268	60.189	11.868	31	83
Binary Measure Doctor Race					
Nonwhite	8268	.198	.399	0	1
White	8268	.802	.399	0	1
Doctor Gender					
Woman	8268	.406	.491	0	1
Man	8268	.594	.491	0	1
Doctor Education	8268	.7	.0	7	7
Doctor Age	8268	40.344	5.243	33	54
Expectations that were Requested	8268	.013	.114	0	1
Patient Married	7371	.683	.466	0	1
Income					
<10k	7371	.132	.339	0	1
10-20k	7371	.243	.429	0	1
20-30k	7371	.185	.388	0	1
30-40k	7371	.106	.308	0	1
40k+	7371	.196	.397	0	1
Don't Know	7371	.085	.278	0	1
Refused	7371	.053	.224	0	1
Number of PCP Visits in last 6 months?					
1	7215	.368	.482	0	1
2	7215	.405	.491	0	1
3	7215	.097	.296	0	1
4	7215	.07	.256	0	1
5	7215	.059	.236	0	1
Doctor's Years Practicing	8268	8.005	5.285	2	21
Length of Visit in Seconds	8268	1603.642	688.714	356	4159

Table 3. Status Characteristics Predicting Requested Medications

	3.1: Race	3.2: Gender	3.3: Education	3.4: All SC	3.5: All SC with Controls
Race					
White Patient, Non-White Doctor	-0.01 (0.01)			-0.01 (0.01)	-0.01 (0.01)
White Doctor, Non-White Patient	-0.01+ (0.00)			-0.01+ (0.00)	-0.01* (0.00)
Gender					
Patient is a Man; Doctor is a Woman		-0.01* (0.00)		-0.01 (0.00)	-0.01 (0.00)
Doctor is a Man; Patient is a Woman		0.01 (0.00)		0.01 (0.01)	0.01+ (0.00)
Education					
Doctor Higher Status			0.00 (0.01)	0.00 (0.00)	-0.00 (0.01)
Controls					
Married					-0.00 (0.01)
Patient Income <40K					0.00 (0.00)
Number of Visits last 6 mo.					0.00 (0.00)
Doctor's Years of Practice					-0.00** (0.00)
Length of Visit in Seconds					0.00 (0.00)
Intercept	0.02*** (0.00)	0.01*** (0.00)	0.01+ (0.01)	0.01* (0.00)	0.02* (0.01)
N	3354	3354	3003	3003	2925
AIC	-4,984.71	-4,987.19	-4,557.68	-4,558.98	-4,364.31
BIC	-4,966.36	-4,968.84	-4,545.66	-4,522.93	-4,298.51

Source:

PLEASS 2007

Reference groups include holding the same status

+ p<.1, * p<.05, **p<.01, *** p<.001

Table 4. Status Characteristics Predicting Requested Tests

	4.1: Race	4.2: Gender	4.3: Education	4.4: All SC	4.5: All SC with Controls
Race					
White Patient, Non-White Doctor	-0.00 (0.01)			-0.00 (0.01)	-0.00 (0.01)
White Doctor, Non-White Patient	-0.00 (0.01)			-0.00 (0.01)	0.00 (0.01)
Gender					
Patient is a Man; Doctor is a Woman		-0.01 (0.01)		-0.01 (0.01)	-0.01 (0.01)
Doctor is a Man; Patient is a Woman		-0.00 (0.01)		-0.01 (0.01)	-0.01 (0.01)
Education					
Doctor Higher Status			0.01 (0.01)	0.01 (0.01)	0.00 (0.01)
Controls					
Married					-0.01 (0.01)
Patient Income <40K					-0.00 (0.01)
Number of Visits last 6 mo.					-0.00+ (0.00)
Doctor's Years of Practice					-0.00 (0.00)
Length of Visit in Seconds					0.00* (0.00)
Intercept	0.02*** (0.00)	0.02*** (0.00)	0.01+ (0.00)	0.01* (0.01)	0.02 (0.01)
N	3822	3822	3432	3432	3432
AIC	-5,345.65	-5,347.91	-4,889.45	-4,884.53	-4,895.68
BIC	-5.326.91	-5,329.16	-4.877.17	-4,847.68	-4,828.13

Source:

PLEASS 2007

Reference groups include holding the same status

+ p<.1, * p<.05, **p<.01, *** p<.001

Table 5. Status Characteristics Predicting Requested Referrals

	5.1: Race	5.2: Gender	5.3: Education	5.4: All SC	5.5: All SC with Controls
Race					
White Patient, Non-White Doctor	0.00 (0.01)			0.00 (0.01)	-0.00 (0.01)
White Doctor, Non-White Patient	-0.01 (0.01)			-0.01 (0.01)	-0.01 (0.01)
Gender					
Patient is a Man; Doctor is a Woman		-0.01 (0.01)		-0.01 (0.01)	-0.01 (0.01)
Doctor is a Man; Patient is a Woman		-0.01 (0.01)		-0.01 (0.01)	-0.01 (0.01)
Education					
Doctor Higher Status			0.00 (0.01)	0.00 (0.01)	-0.00 (0.01)
Controls					
Married					-0.01 (0.01)
Patient Income <40K					-0.01 (0.01)
Number of Visits last 6 mo.					0.00 (0.00)
Doctor's Years of Practice					-0.00 (0.00)
Length of Visit in Seconds					0.00+ (0.00)
Intercept	0.02*** (0.00)	0.02*** (0.00)	0.01+ (0.01)	0.02* (0.01)	0.03 (0.03)
N	2925	2925	2496	2496	2457
AIC	-4,220.49	-4,220.49	-3,670.10	-3,668.43	-3,574.30
BIC	-4,202.55	-4,202.55	-3,658.45	-3,633.50	-3,510.43

Source:

PLEASS 2007

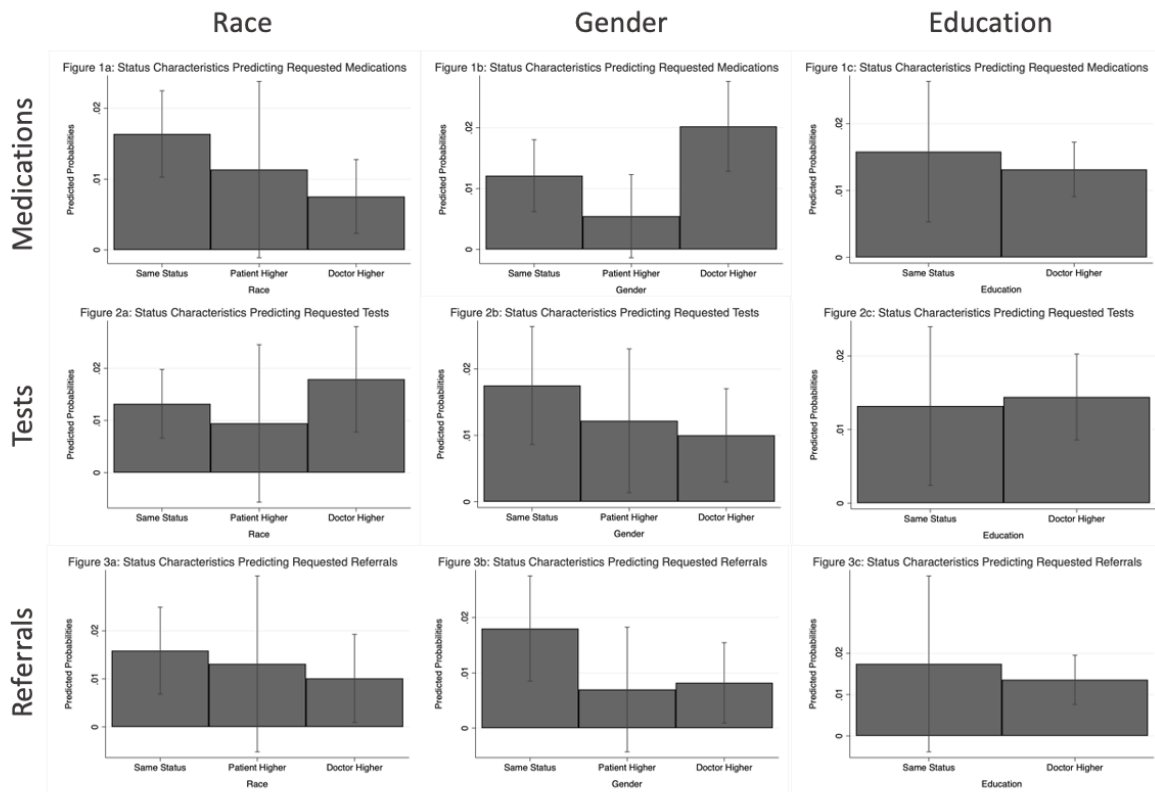
Reference groups include holding the same status

+ p<.1, * p<.05, **p<.01, *** p<.001

Appendix B: Figures

Figure 1. Status Characteristics Predicting Medical Experiences

Figure 1. Status Characteristics Predicting Medical Experiences



Source: PLEASS 2007

Appendix C: Specific Types of Expected Medical Experiences

Figure 2. Specific Types of Expected Medical Experiences

Medications	Tests	Referrals
Allergy	Blood Pressure	Allergist
Antibiotic/Anti-Fungal	Blood Sugar	Audiologist
Anti-Smoking	Breathing	Cardiologist
Arthritis	CAT Scan	Dentist
Blood Pressure	Cholesterol	Dermatologist
Change Prescription	Colon Cancer	Dietician
Cholesterol	EKG	Endocrinologist
Cold Symptoms	Exercise Stress	ENT
Diabetes	GI	Eye
Heart	Hepatitis/Liver	GI
Pain	Hearing	Hematologist
Psychiatric	HIV	Neurologist
Sleeping Agent	PSA	Orthopedist
Topical	Rectal	Pain
Other	Vision	Podiatrist
	Urine	Psychiatrist
	Xray	Rheumatologist
	Other	Urologist
		Other

Appendix D: Patient Questionnaire

ID _____

Date _____

Patient Expectations and Satisfaction with Care

I'd like you to tell me how necessary the following things are for your doctor to do today.

<i>How necessary is it for the doctor to...</i>	Absolutely Necessary	Somewhat Necessary	Unsure	Somewhat Unnecessary	Absolutely Unnecessary	Refused
1. be familiar with your medical record before walking into the room.	1	2	3	4	5	12
2. ask how your condition is affecting your life and family.	1	2	3	4	5	12
3. ask about your personal health habits.	1	2	3	4	5	12
4. ask about previous treatments you've tried for your condition.	1	2	3	4	5	12
5. prescribe a new medication. If 1 or 2, what kind of medication would you like to receive?	1	2	3	4	5	12
6. listen to your lungs (breathing) with a stethoscope.	1	2	3	4	5	12
7. check your abdomen for tenderness or organ enlargement.	1	2	3	4	5	12
8. refer you to a specialist. If 1 or 2, what kind of test do you want to receive?	1	2	3	4	5	12
9. order tests, If 1 or 2, what kind of test do you want to receive?	1	2	3	4	5	12
10. is there anything else you wanted the doctor to do today? What would you like the doctor to do today? _____ How necessary is it for the doctor to do this?	1	2	3	4	5	12

You said that you wanted a referral/new medication/test during your visit today.

What kind of MEDICATION would you like to receive? (refer to question 5)

1 0 Allergy	1 0 Changed Prescription	1 0 Pain
1 0 Antibiotics/Anti-fungal	1 0 Cholesterol	1 0 Psychiatric
1 0 Anti-smoking	1 0 Cold Symptoms	1 0 Sleeping Agent
1 0 Arthritis	1 0 Diabetes	1 0 Topical
1 0 Blood pressure	1 0 Heart	1 0 Other _____

What kind of SPECIALIST would you like to be referred to? (refer to question 8)

1 0 Allergist	1 0 Dietician	1 0 Hematologist	1 0 Psychiatrist
1 0 Audiologist	1 0 Endocrinologist	1 0 Neurologist	1 0 Rheumatologist
1 0 Cardiologist	1 0 ENT	1 0 Orthopedist	1 0 Urologist
1 0 Dentist	1 0 Eye	1 0 Pain	1 0 Other
1 0 Dermatologist	1 0 GI	1 0 Podiatrist	_____

What kind of TEST would you like to receive? (refer to question 10)

1 0 Blood	1 0 Colon Cancer	1 0 Hearing	1 0 Urine
1 0 Blood sugar	1 0 EKG	1 0 HIV	1 0 X-Ray
1 0 Breathing	1 0 Exercise Stress	1 0 PSA	1 0 Other
1 0 CATscan/MRI	1 0 GI	1 0 Rectal	_____
1 0 Cholesterol	1 0 Hepatitis/Liver	1 0 Vision	

Now I would like to ask you about your current health.

<p>1. In general, would you say your health is:</p> <ol style="list-style-type: none"> 1. Excellent 2. Very Good 3. Good 4. Fair 5. Poor 	
<p><i>The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?</i></p>	
<p>2. Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling or playing golf</p> <ol style="list-style-type: none"> 1. Yes, limited a lot 2. Yes, limited a little 3. No, not limited at all 	<p>3. Climbing several flights of stairs</p> <ol style="list-style-type: none"> 1. Yes, limited a lot 2. Yes, limited a little 3. No, not limited at all
<p><i>During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?</i></p>	
<p>4. Accomplished less than you would like</p> <ol style="list-style-type: none"> 1. Yes 2. No 	<p>5. Were limited in the kind of work or other activities</p> <ol style="list-style-type: none"> 1. Yes 2. No
<p><i>During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?</i></p>	
<p>6. Accomplished less than you would like</p> <ol style="list-style-type: none"> 1. Yes 	<p>7. Didn't do work or other activities as carefully as usual</p> <ol style="list-style-type: none"> 1. Yes

2. No	2. No
<p>8. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?</p> <p>1. Not at all 2. A little bit 3. Moderately 4. Quite a bit 5. Extremely</p>	

These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks-

<p>9. Have you felt calm and peaceful?</p> <p>1. All the time 2. Most of the time 3. A Good bit of the time 4. Some of the time 5. A Little of the time 6. None of the time</p>	<p>10. Did you have a lot of energy?</p> <p>1. All the time 2. Most of the time 3. A Good bit of the time 4. Some of the time 5. A Little of the time 6. None of the time</p>
<p>11. Have you felt downhearted and blue?</p> <p>1. All the time 2. Most of the time 3. A Good bit of the time 4. Some of the time 5. A Little of the time 6. None of the time</p>	<p>12. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)?</p> <p>1. All the time 2. Most of the time 3. Some of the time 4. A Little of the time 5. None of the time</p>

Here are a few questions about yourself.

1. Including today, how many times have you seen your Primary Care Physician in the last six months?

1	2	3	4	5+	777	888
---	---	---	---	----	-----	-----

2. The race you consider yourself?

Hispanic White	1
Hispanic Black	2
American Indian	3
Black	4
Asian	5
White	6
Unknown	7
Other	8
Refused	12

3. What is the highest level of education you have completed? (select one)

Hispanic White	1
Hispanic Black	2
American Indian	3
Black	4

Asian	5
White	6
Unknown	7
Other	8
Refused	12

4. Are you currently married? (select one)

Married	1
Divorced or Separated	2
Widowed	3
Never Married	4
Don't Know	11
Refused	12

5. With whom do you live? (select all that apply)

No one	1	0	12
Spouse	1	0	12
Child or grandchild	1	0	12
Parent	1	0	12
Friend	1	0	12
Other:	1	0	12

6. Do you have a particular religion? (select one)

Yes	1
No	2
Don't Know	11
Refused	12

7. If yes, which one? (select one)

Catholic	1
Protestant	2
Jewish	3
Muslim	4
Other:	5
None	6
Don't Know	11
Refused	12

**8. What is the range of your annual household income from all sources?
(select one)**

Under \$10,000	1
\$10,000 - \$20,000	2
\$20,001 - \$30,000	3
\$30,001 - \$40,000	4
Over \$40,000	5
Don't Know	11
Refused	12

9. What is your age? _____

*We are interested in knowing how familiar patients are with these medical terms.
Would you please read the following words out loud?*

List 1	List 2	List 3
fat _____	fatigue _____	allergic _____
flu _____	pelvic _____	menstrual _____
pill _____	jaundice _____	testicle _____
dose _____	infection _____	colitis _____
eye _____	exercise _____	emergency _____
stress _____	behavior _____	medication _____
smear _____	prescription _____	occupation _____
nerves _____	notify _____	sexually _____
germs _____	gallbladder _____	alcoholism _____
meals _____	calories _____	irritation _____
disease _____	depression _____	constipation _____
cancer _____	miscarriage _____	gonorrhea _____
caffeine _____	pregnancy _____	inflammatory _____
attack _____	arthritis _____	diabetes _____
kidney _____	nutrition _____	hepatitis _____
hormones _____	menopause _____	antibiotics _____
herpes _____	appendix _____	diagnosis _____
seizure _____	abnormal _____	potassium _____
bowel _____	syphilis _____	anemia _____
asthma _____	hemorrhoids _____	obesity _____
rectal _____	nausea _____	osteoporosis _____
incest _____	directed _____	impetigo _____

Finally, I may want to follow up this visit with one phone call to ask a few more questions; may I call you at home? Is your number the same as we confirmed before? What would be a good time?

PERMISSION: Yes 1 No 0 Time: _____

END OF PRE-VISIT INTERVIEW

Thank you very much. Please look for me in the waiting area after your doctor visit.

I'd like to ask you about the visit you just had with your doctor. I want to remind you the NONE of this information will be given to your doctor or anyone else here at the clinic not involved with the study.

Please answer the following questions regarding your visit to the doctor.

<i>How would you rate your physician's performance on the following:</i>	Excellent	Very Good	Good	Fair	Poor	Don' t Know	Refused
1. Telling you everything; being truthful, up front and frank; not keeping things from you that you should know	1	2	3	4	5	7	8
2. Greeting you warmly; calling you by the name you prefer; being friendly, never crabby or rude	1	2	3	4	5	7	8
3. Treating you like you're on the same level; never "talking down" to you or treating you like a child	1	2	3	4	5	7	8
4. Letting you tell your story; listening carefully; asking thoughtful questions; not interrupting you while you're talking	1	2	3	4	5	7	8
5. Showing interest in you as a person; not acting bored or ignoring what you have to say	1	2	3	4	5	7	8
6. Warning you during the physical exam about what he/she is going to do and why; telling you what he/she finds	1	2	3	4	5	7	8
7. Discussing options with you; asking your opinion; offering choices and letting you help decide what to do; asking what you think before telling you what to do	1	2	3	4	5	7	8
8. Encouraging you to ask questions; answering them clearly; never avoiding your questions or lecturing you	1	2	3	4	5	7	8
9. Explaining what you need to know about your problems, how and why they occurred, and what to expect next	1	2	3	4	5	7	8
10. Using words you can understand when explaining your problems and treatment; explaining any technical medical terms in plain language	1	2	3	4	5	7	8

Here are some more questions about the visit you just made.

<i>In terms of your satisfaction, how would you rate each of the following?</i>	Excellent	Very Good	Good	Fair	Poor	Don' t Know	Refused
1. How long you waited to get an appointment	1	2	3	4	5	7	8

2. Convenience of the location of the office	1	2	3	4	5	7	8
3. Getting through to the office by phone	1	2	3	4	5	7	8
4. Length of time waiting at the office	1	2	3	4	5	7	8
5. Time spent with the person you saw	1	2	3	4	5	7	8
6. Explanation of what was done for you	1	2	3	4	5	7	8
7. The technical skills (thoroughness, carefulness, competence) of the person you saw	1	2	3	4	5	7	8
8. The personal manner (courtesy, respect, sensitivity, friendliness) of the person you saw	1	2	3	4	5	7	8
9. The visit overall	1	2	3	4	5	7	8

1. Did anyone else go with you into the examining room?	1 Yes	0 No	7 Refused
---	----------	---------	--------------

2. (If Yes) Who came with you?	1 Spouse	2 Adult Child	3 Other Relative	4 Friend	7 Refused
--------------------------------	-------------	------------------	---------------------	-------------	--------------

3. (If Yes) Was this person with you and your doctor for the entire visit?	1 Yes	0 No	7 Refused
--	----------	---------	--------------

<i>Did the doctor...</i>	Did this occur?			
	No	Yes	DK	R
1. familiarize him/herself with your medical record before walking into the room?	0	1	7	8
2. ask how your condition is affecting your life and family?	0	1	7	8
3. ask about your personal health habits?	0	1	7	8
4. ask about previous treatments you've tried for your condition?	0	1	7	8
5. prescribe a new medication?	0	1	7	8

6. (If yes) What medication did you receive?	Did this occur?			
	No	Yes	DK	R
A. Allergy	0	1	7	8
B. Antibiotics/Anti-fungal	0	1	7	8
C. Anti-smoking	0	1	7	8
D. Arthritis	0	1	7	8
E. Blood pressure	0	1	7	8
F. Changed Prescription	0	1	7	8
G. Cholesterol	0	1	7	8
	Did this occur?			

<i>Did the doctor...</i>	No	Yes	DK	R
A. Cold symptoms	0	1	7	8
B. Diabetes	0	1	7	8
C. Heart	0	1	7	8
D. Pain	0	1	7	8
E. Psychiatric	0	1	7	8
F. Sleeping Agent	0	1	7	8
G. Topical	0	1	7	8
H. Other _____?	0	1	7	8
7. listen to your lungs (breathing) with a stethoscope?	0	1	7	8
8. check your abdomen for tenderness or organ enlargement?	0	1	7	8
9. refer you to a specialist?	0	1	7	8

10. (If yes) What specialist were you referred to?	Did this occur?			
	No	Yes	DK	R
A. Allergist	0	1	7	8
B. Audiologist	0	1	7	8
C. Cardiologist	0	1	7	8
D. Dentist	0	1	7	8
E. Dermatologist	0	1	7	8
F. Dietician	0	1	7	8
G. Endocrinologist	0	1	7	8
H. ENT	0	1	7	8
I. Eye	0	1	7	8
J. GI	0	1	7	8
K. Hematologist	0	1	7	8
L. Neurologist	0	1	7	8
M. Orthopedist	0	1	7	8
N. Pain	0	1	7	8
O. Podiatrist	0	1	7	8
P. Psychiatrist	0	1	7	8
Q. Rheumatologist	0	1	7	8
R. Urologist	0	1	7	8
S. Other	0	1	7	8
11. order a test?	0	1	7	8

12. (If Yes) What tests did you receive?	No	Yes	DK	R
A. Blood	0	1	7	8
B. Blood sugar	0	1	7	8
C. Breathing	0	1	7	8

D. CATScan/MRI	0	1	7	8
E. Cholesterol	0	1	7	8
F. Colon Cancer	0	1	7	8
G. EKG	0	1	7	8
H. Exercise Stress	0	1	7	8
I. GI	0	1	7	8
J. Hepatitis/Liver	0	1	7	8

<i>Did the doctor...</i>	No	Yes	DK	R
A. Hearing	0	1	7	8
B. HIV	0	1	7	8
C. PSA	0	1	7	8
D. Rectal	0	1	7	8
E. Vision	0	1	7	8
F. Urine	0	1	7	8
G. X-Ray	0	1	7	8
H. Other	0	1	7	8
13. Was there anything else the doctor did for you? (specify):	0	1	7	8
14. Was there anything else you wanted from the doctor that he/she did not do? (specify):	0	1	7	8
15. During your visit, did you think of anything else you wanted from the doctor?	0		1	
16. If YES, what else did you decide you wanted?				
A. _____ Did it occur?	0	1	7	8
B. _____ Did it occur?	0	1	7	8

<i>Finally, please tell me...</i>	No	Yes	Don't Know	Refused	N/A
17. Did you get all the tests that you wanted?	0	1	7	8	9
18. If no, what did you want that you didn't get?					
19. Did you get all the referrals to specialists that you wanted?	0	1	7	8	9
20. If no, what did you want that you didn't get?					
21. Did you get all the new medications that you wanted?	0	1	7	8	9

22. If no, what did you want that you didn't get?	
---	--

Now I'd like to ask you about the relationship you have with your doctor.

<i>Please indicate how much you agree or disagree with these statements.</i>	Totally Agree	Agree	Neutral	Disagree	Totally Disagree	No Response
1. I doubt that my doctor really cares about me as a person	1	2	3	4	5	7
2. My doctor is usually considerate of my needs and puts them first	1	2	3	4	5	7
3. I trust my doctor so much I always try to follow his/her advice	1	2	3	4	5	7
4. If my doctor tells me something is so, then it must be true	1	2	3	4	5	7
5. I sometimes distrust my doctor's opinion and would like a second one	1	2	3	4	5	7
6. I trust my doctor's judgments about my medical care	1	2	3	4	5	7
7. I feel my doctor does not do everything he/she should about my medical care	1	2	3	4	5	7
8. I trust my doctor to put my medical needs above all other consideration when treating my medical problems	1	2	3	4	5	7
9. My doctor is well qualified to manage (diagnose and treat or make an appropriate referral) medical problems like mine	1	2	3	4	5	7
10. I trust my doctor to tell me if a mistake was made about my treatment	1	2	3	4	5	7
11. I sometimes worry that my doctor may not keep the information we discuss totally private	1	2	3	4	5	7

1. If there were a choice between treatments, would this doctor ask you to help make the decision?

1. Definitely yes
2. Probably yes
3. Unsure
4. Probably no
5. Definitely no

2. How often does this doctor make an effort to give you some control over your treatment?

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

3. How often does this doctor ask you to take some of the responsibility for your treatment?

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Not at all

Thank you very much for participating in our study.

END OF INTERVIEW