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Aneel Maini April 2, 2018

Relationships Get Sick Too

An Exploration of Nurse-Physician Relationships in Modern Medicine

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Abstract

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By 2050, it is expected that there will be 83.7 million people living in the United States aged 65 or older, almost double the estimated population in 2012. However, hospitals are currently not equipped to handle such a large influx of patients and it is imperative that we research how to improve and optimize the care received by our nation's future elderly population. Therefore, it is worth exploring the relationship between nurses and physicians as past research has shown that increased teamwork in medicine results in better patient outcomes. In this study, I will be examining the nurse-physician relationship and attempting to find factors that influence the quality of the relationship. Additionally, I will be examining the perceptions of current hospital administration teamwork initiatives to better understand what nurses and physicians believe works and what does not work in actual practice. I first discuss the theoretical framework and present supporting empirical research about the relationship between nurses and physicians. I conducted 27 semi-structured, in-depth interviews with nurses and physicians from both Georgia and the South Florida region. I present major themes and patterns in the experiences of my participants. This study adds to previous literature by examining the perceptions and experiences of nurses and physicians about their working relationship.

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I. Introduction

Workplace relationships have been heavily studied in recent years, especially those among professionals in the medical field. However, there is limited literature examining the perceptions and experiences of nurses and physicians about their working relationship, something this study seeks to remedy.

Nurse-physician relationships are an important topic because of their connection to patient outcomes. Numerous studies have found that when there is effective collaboration between nurses and physicians, there is an improvement in the quality of patient care as well as patient health outcomes whereas ineffective collaboration decreases the quality of patient care and often leads to increased mortality rates (Tang et al 2013: 292). Additionally, the better the relationship is between nurses and physicians, the more likely it is that they will enjoy their time in their respective career (Khowaja-Punjwani et al 2017: 2). There is currently a shortage of nurses in modern medicine, a good indicator of the "work dissatisfaction, lack of autonomy and poor health among nurses," all of which can be traced back to poor nurse-physician relationships (Tang et al 2013: 292).

In recent years, there has been a push towards team-based medicine by hospital administrations due to the reasons above, meaning that nurses, physicians, and other medical professionals work together, as a team, when treating patients. This push has resulted in a variety of initiatives such as employee pledges, guidelines mandating teamwork in the workplace and interdisciplinary ward rounds to name a couple. How these different initiatives are perceived by nurses and physicians is not well studied and will be examined in this paper.

According to a study done in 2014 using census data, by 2050, "the population aged 65 and over is projected to be 83.7 million, almost double its estimated population of 43.1 million in

2012" (Ortman et al 2014). Due to this drastic increase in the United States' elderly population, it is imperative that we study and improve our hospitals so that the medical professionals of the future are well equipped and ready to handle the large patient population to come.

II. Research Questions

1. How do nurses talk about their relationships, interactions, and experiences with physicians?
2. How do physicians talk about their relationships, interactions, and experiences with nurses?

This study seeks to explore the relationship between nurses and physicians. First, I present the empirical literature previously done on the topic and discuss the theoretical framework of the nurse-physician relationship. Based on previous literature and the theoretical framework, I formulate my hypotheses. Following this, I detail the methods used in this study. Then I discuss my findings and patterns that were discovered in analysis. I conclude this paper with limitations present in the study, recommendations for future research, and implications for the present work.

III. Theoretical Framework and Empirical Research

Hospital Culture in the Past

The culture in hospitals in the past was very different than the culture in hospitals today. They were far less team focused and there was a clear hierarchy between doctors and nurses, of course with doctors being superior over nurses. Nurses were to make suggestions regarding patient care, however they always had to make their suggestions seem as if it was the idea of the physician. This observation among others led Stein et al to coin the term the "Doctor-Nurse Game" in 1967 to describe the relationship between nurses and physicians, the main rule of the game being "that open disagreement between the players had to be avoided at all costs."

According to Stein et al, when the game was successful, the reward was an efficient nurse-physician team where both professions felt valued and successful. On the other hand, when the game was not successful and either the physicians interpreted the nurse's suggestions as disrespectful or the nurses were outspoken, the physicians would be "tolerated as clods" and the nurses would either be fired or "constantly reminded in a hundred ways that they were disliked." Stein et al believe that the training nurses received in 1967 was the cause for this "game," in that nearly ninety percent of nurses working in 1967 had been trained in a very disciplined, hospital-run nursing school that taught them subservience and reinforced the hierarchy present. The nurses in 1967 were told that they were not supposed to give suggestions to the physicians even when it would directly benefit the patients, the only way around this "was to use the doctor-nurse game and communicate the recommendation without appearing to do so" (Stein et al 1990: 546). This aversion to conflict resulted in good relationships between the nurses and physicians, albeit with a clear and strictly followed hierarchy.

In a follow-up paper written in 1990, Stein et al believe that within the two decades that transpired, the nurse-physician relationship changed significantly. But what changed? According to Stein et al, there are five key things that happened. First, due to the increased commercialization of healthcare, the public no longer holds physicians to the same level of esteem as they once did and a greater amount of the population recognizes that physicians are not omnipotent, they have flaws too. Second, there is an increasing number of female physicians and male nurses, working against "the elements of the game that reflect stereotypical roles of male dominance and female passivity." Third, there are less individuals choosing to go into the nursing profession for several reasons such as "relatively small financial rewards, limited clinical autonomy as compared with physicians, and little involvement in hospital management decisions

regarding standards of practice or support services." Fourth, nurses are starting to be considered as highly trained and certified individuals by more and more people with physicians relying on them more. This is partially because nurses are now getting college degrees from academic institutions rather than a nursing degree from a hospital-run nursing school. These academic institutions teach nursing students that they are equal to physicians and are responsible for making their own decisions and taking responsibility for their patients. Lastly, between 1967 and 1990, nurses decided to stop playing the "game" and are instead trying to change the relationship between nurses and physicians (Stein et al 1990: 546-548). Adding to this, in Steve Taylor and David Field's book *Sociology of Health and Health Care*, they point out that for nurses to no longer be considered the subordinates of the physicians and become a more prestigious profession, they can either become "a shadow of the medical profession" or it can become an entirely different profession "based upon a different ethos and practice" (Taylor and Field 1997: 245).

In Andrew Abbott's *The System of Professions*, he points out that internal stratification and status difference combine "to create wide disparities in income, power, and prestige within professions." Additionally, when numerous professions are involved in one sphere of work, as is the case in healthcare, they tend to fall into a "stable status hierarchy." In the sphere of healthcare work, this hierarchy is as follows: "medicine, nursing, pharmacy, physicians' assistants, laboratory technicians, and so on." Abbott believes that when the range of prestige of the professions within a sphere of work grow, status overlap results among the different professions leading to ambiguity regarding the status and public perception of these professions (Abbott 1988: 120). This is related to Stein et al's fourth point of nurses being considered as highly trained and certified individuals in modern medicine. The prestige of the nursing

profession has increased in recent years, resulting in a status overlap between nurses and physicians which may explain why relationships are better now than they were in the past. Additionally, in recent years with the rise of nurse practitioners, physician assistants, and other such medical professions that are not specifically physicians or nurses, there has been an increase in the range of prestige within the professions of the healthcare sphere. This results in more status overlap between nurses and physicians which would further explain improved nurse-physician relationships. While nurse-physician relationships today are by no means ideal, Abbott's theory would explain the relatively recent push towards greater teamwork between the different medical professions. This makes sense historically as nurse practitioners and physician assistants as professions originated in the 1960s, becoming larger by the 1980s. Then in the 1990s and early 2000s, there was a push towards greater collaboration between nurses and physicians due to the status overlap resulting from the increase in the range of prestige.

Hospital Culture in the Present

The culture in modern day hospitals is far more team focused than it was in the past. Tang et al even found that nurse-physician relationships are becoming better and more collegial, illustrated by greater trust and respect between the two professions and nurses having greater autonomy. Tang et al also found that both nurses and physicians understood that if they worked together, patients would receive better quality care and would thus have better outcomes (2013: 292-293). But what was the cause of this push towards team-based medicine? In recent years, hospital administrations have included teamwork and respectful interactions in their employee guidelines. One such example of this that is pertinent to this study are employee pledges which typically focus on the following five tenants: we will treat each other the way we want to be treated, we will cultivate a spirit of inquiry, we will defer to each other's expertise, we will

communicate effectively, and we will commit to these behaviors in support of healthcare care transformation. Similar guidelines exist at most institutions but there is limited research on the effectiveness of such initiatives. Another example of a teamwork initiative is interdisciplinary ward rounds, which is when a variety of medical professionals round as a team, checking in on patients and using each other's different skill sets. Interdisciplinary ward rounds have been found to improve nurse-physician relationships and patient outcomes as these two professions learn to use one another's respective expertise, thus providing superior care to patients.

Good Versus Bad Nurse-Physician Relationships

A question one must ask is what determines whether a nurse-physician relationship will be good or bad? According to Khowaja-Punjwani et al, both nurses and physicians are at fault when they have a poor relationship as "both forget that they should be working as part of a multidisciplinary team focused on the best interest of their patient" (2017: 4). However, Tang et al dive even deeper into the determinants of the quality of nurse-physician relationships, splitting them up into the following five categories: communication, respect and trust, understanding professional roles, task prioritizing, and unequal power.

Communication is incredibly important in hospital settings, not just for the welfare of the patients but for the quality of the nurse-physician relationships as well. Tang et al found that the communication between nurses and physicians tends to be "unclear and imprecise," however he did find that this was less prevalent in hospital departments such as the ICU where there are always numerous physicians, allowing nurses to ask questions at any time thus improving communication. Additionally, Tang et al found that in many cases, nurses do not gather all the relevant information prior to contacting the physician, resulting in both further unclear communication and the "physicians to raise their voices rudely, which significantly affected the

nurses' attitudes towards patient care and hindered teamwork" (2013: 298). As Khowaja-Punjwani et al said, the blame for the quality of nurse-physician relationships cannot be placed on only one profession. The difference in nurse-physician relationships between France and the United States was examined by Lucie Michel in 2017. During Michel's research in the United States, she found that while working closely with the nurses, they would only interact with other nurses and would not talk to the administration, nurse assistants, or physicians unless necessary for the care of a patient. This led her to conclude that there exists a stronger nursing hierarchy in the United States which she believes may "discourage fluid communication" (Michel 2017: 712). Michel also noticed that while nurses in both France and the United States use computers to chart patient data, nurses in the United States also use the computer as a way of communicating with the physicians. In France, physicians would tell the nurses face-to-face when they put in an order for a patient whereas in the United States, the physician's orders would simply appear in the nurse's work list. While Michel was interviewing the nurses in the United States, many of them raised concerns about missing orders and other important information because of the computers. Additionally, one nurse said that "because of the computer, the doctors don't always talk to you, they send the order online, it makes the work worse, there is no more communication" (Michel 2017: 714). These observations led Michel to conclude that computers and pagers are becoming the primary ways healthcare workers communicate in modern medicine. This is interrelated with a theory presented in a paper by Wheelan et al from 2003 where they state that a developing group goes through five stages of growth. The first stage focuses on inclusion and dependency, during which members develop boundaries of acceptable behavior. The second stage focuses on counter-dependency and conflict, during which members of the group argue over who oversees the group. If these arguments are resolved, the group becomes more cohesive and stable. The

third stage focuses on increasing collaboration and teamwork and the fourth focuses on increasing group effectiveness and productivity. The fifth stage only occurs in groups that end as it focuses on disruption and conflict caused by imminent cessation (Wheelan et al 2003: 528). Due to the lack of communication because of an increase in the use of technology, nurses are not able to get past the second stage because they are not regularly interacting face-to-face with the physicians. This leads one to believe that nurses who have been working in a department for a long time will feel the team spirit more so than nurses who have only been in it for a short amount of time. Additionally, this explains why there is greater teamwork present in departments such as the intensive care unit where individuals are required to interact face-to-face regularly, theoretically allowing them to proceed in these stages. Over the course of her research, Michel also notices the rapid turnover of residents in hospitals in the United States. Michel believes that this rapid turnover "discourages nurses and physicians from building strong relationships, either as professionals or as any other kind of team," thus preventing them from communicating effectively (2017: 715). Lastly, in a study conducted by Robinson et al, it was found that linguistic and cultural barriers also play a role in poor communication between nurses and physicians. Numerous participants in their study claimed that they had poor communication with individuals who could not fully speak English and that messages with these individuals are sometimes misinterpreted (Robinson et al 2010: 212).

Respect and trust between nurses and physicians is the second determinant of the quality of nurse-physician relationships. It has been found that many nurses feel as if their input regarding a patient's treatment is not valued by physicians, resulting in nurses experiencing "a lack of respect and trust, which significantly hampered the development of a more collaborative physician-nurse relationship" (Tang et al 2013: 298). However, it has also been found that

physicians do value and utilize the nurses input regarding patients, illustrating that issues with respect and trust between nurses and physicians is related to issues with communication. Additionally, nurses often complain that physicians are rude to them and sometimes humiliate them, making "them feel incompetent and intimidated," resulting "in a lack of and fear of communication with physicians" (Tang et al 2013: 299). This clearly shows that a lack of respect and trust between nurses and physicians results in poor communication.

The third determinant of the quality of nurse-physician relationships is the understanding of professional roles. Physicians and nurses play different roles when it comes to the care of patients in modern medicine. Physicians are typically considered to be more intellectual, as they are the ones responsible for devising a patient's treatment plan whereas nurses are typically considered to be more hands-on with the patients but less intellectual than the physicians. On the other hand, physicians are far less present than nurses and typically spend only a very small part of their day with the patients whereas nurses are always there. Interestingly, Tang et al found that "nurses tend to use more of their intuitions, observations and understanding of human experiences of diseases" when treating a patient whereas "physicians tend to assess patients' conditions based on objective values such as vital signs and laboratory investigations" (2013: 299). These different ways of assessing a patients' condition reflects how much time each profession spends with the patients. Another interesting finding by Tang et al was that physicians typically believe nurse collaboration to be them giving orders to the nurses and the nurses following through with them whereas nurses, while able to effectively carry out these orders, believe collaboration to be more nurse autonomy and them having a greater say in the decision-making regarding patient care. Considering how much time the nurses spend with the patients and families, physicians should use the nurses as their eyes and ears to better holistically care for

the patients. However, numerous studies have determined that the boundaries originally present between nurses and physicians have blurred in recent years, increasing the need of true collaboration between the two professions. Nurse-physician relationships improve with greater nurse participation in decision-making as well as in the care of patients. However, some physicians do not recognize the benefit nurses can provide regarding patient care, resulting in poor relationships (Tang et al 2013: 299). As Horsburgh et al stated, "both nursing and medicine need to change if a collaborative model is to work" (2001: 882).

Task prioritizing is the fourth determinant of the quality of nurse-physician relationships. Tang et al found that nurses and physicians tend to regard different things as important and not important, often causing the other to feel frustrated. For example, nurses tend to get annoyed when physicians ignore concerns regarding a patient that they believe are important whereas physicians get annoyed when nurses do not understand the rationale and importance of certain orders, especially when the nurses choose to complete other orders that they believe are more important. Task prioritizing is closely related to communication; nurses and physicians possess different knowledge about their patients and have also undergone different training. Thus, good communication is necessary for adequate care to take place (Tang et al 2013: 299).

The fifth and last determinant of the quality of nurse-physician relationships is unequal power. Tang et al found that in many cases, nurses do not feel comfortable communicating and discussing patient care as an equal with physicians. This may be related to different levels of education, status, and prestige between the nurses and physicians. Cultural roots play a role in the interactions between nurses and physicians as well. For example, if a physician comes from a place where physicians are dominant over nurses, that physician will continue to be dominant and will promote a culture of inequality in an institution that may not have experienced it

previously. Lastly, physicians overall tend to control the decision-making process regarding patient care while nurses typically only follow orders (2013: 299-300). This culture of physicians giving the orders and nurses following them results in a less even playing field because nurses do not have an equal say in what those orders entail. For good nurse-physician relationships to develop, this clear difference in power needs to be addressed.

Communication, respect and trust, understanding professional roles, task prioritizing, and unequal power are all related regarding the quality of nurse-physician relationships and offer an insight into what causes these relationships to be good or bad. Out of all five of these categories, communication is perhaps the most important because of the impact it has on the other four. The better the communication is between nurses and physicians, the more respect physicians will have towards nurses due to their greater understanding of the huge role they play in patient care and they will trust the nurse's judgement more if they know how much time the nurses spend with the patients. Greater communication will also allow physicians to understand that nurses do far more than simply follow their orders, they are the ones who spend time with the patient and his or her friends and family, getting to know them on a personal level. Additionally, improved communication will allow physicians to explain to nurses why certain tasks are more important than others in a collegial manner and will also allow nurses to do the same with physicians. Lastly, more communication will help give nurses more confidence when interacting with physicians, resulting in more power equality between the professions. These five categories impact one another in many other ways as well, but communication has an impact on all of them and therefore has the largest amount of control over the quality of nurse-physician relationships in the healthcare sphere.

Changes in Medical Curriculum

As stated previously by Stein et al, school curriculum also plays a large role in the quality of nurse-physician relationships. This difference in training can be seen when comparing how nurses and physicians care for patients. While physicians are "traditionally trained to develop technical skills and focus on finding cures for diseases, nurses are trained in developing interpersonal skills with patients and colleagues, providing holistic care for patients and making decisions interdependently with physicians" (Tang et al 2013: 294). Because of this training focused on curing diseases, physicians often prefer to work on their own without nurses whereas nurses prefer to work with physicians to care for the patient holistically rather than simply treat the disease. Thus, nurses are more likely to desire inter-professional collaboration than physicians (Tang et al 2013: 293).

Like hospitals, there has been an increased emphasis on teamwork and team-based learning in medical education in recent years. As stated previously, in the past nursing schools would teach nursing students to be subservient and reinforced the hierarchy present within the healthcare sphere. However, it was recognized that the way nurses and physicians behave as professionals is largely determined by the culture present in the institution where they train (Tang et al 2013: 292). Thus, most institutions now employ multidisciplinary learning environments where medical students learn with nursing students, social workers, and other professions within the healthcare sphere. Some institutions even provide nonmedical teambuilding exercises for these students in order for them to further illustrate to them that it is beneficial for them to cultivate a relationship with other professionals in their working environment. In fact, teamwork skills have been added to the "Interpersonal and Communication Skill" core competency by the Accreditation Council for Graduate Medical Education and residency program directors have started advocating for teamwork training. Overall, a greater

emphasis on teamwork has been implemented in medical education within the last few years and while this is still a relatively new concept, teaching prospective medical professionals the value of teamwork early on in their education hopefully has an impact on how they collaborate with one another during their careers. This will potentially improve nurse-physician relationships in all medical institutions in the future once this form of education becomes the norm.

Summary

Nurse-physician relationships are such an important topic largely because of the role they play in patient outcomes. As stated previously, when nurses and physicians work together, there is an improvement in the quality of patient care as well as patient health outcomes. In modern society, people are living longer lives and the entire baby boomer generation will be older than 65 in a little over a decade. America as well as the rest of the developed world is about to have a far larger elderly population than it has ever experienced and unless we have a proper medical infrastructure in place, we will have issues treating everyone with the same quality of care that we have become accustomed to. Part of this comes down to having efficient medical teams which will hopefully help care for this increasingly elderly population. Two additional things that can be further implemented in the future to help create even better nurse-physician relationships are inter-professional education programs and interdisciplinary ward rounds. As stated previously, inter-professional education programs teach future medical professionals how to collaborate with other professionals within the healthcare sphere. According to Tang et al, both nurses and physicians have found these programs helpful in teaching them how to have meaningful friendships, acquire adequate communication skills, listen to other professional's perspectives regarding the care of a patient, and prioritizing patient care as a team (2013: 300). Interdisciplinary ward rounds are, as the name suggests, conducted by professionals from

throughout the healthcare sphere. It has been found that effective ward rounds done in this fashion promote face-to-face communication, allowing nurses to get past Wheelan et al's second stage and develop a more collaborative and productive relationship. Additionally, regular participation by nurses in these interdisciplinary ward rounds will allow them to gain confidence when communicating with physicians, resulting in an overall improvement of the relationship between nurses and physicians.

IV. Hypotheses

My first hypothesis is that nurse participants will perceive their relationships and interactions with younger physicians who have been exposed to inter-professional education programs and the overall culture of working with nurses throughout their career as more positive than their relationships with older physicians and that younger physicians will perceive their relationships and interactions with nurses as more positive than older physicians. My second hypothesis is that nurses who have been in a department for a long time will describe having a more positive relationship and better interactions with physicians than nurses who have been in a department for a shorter period. While these are my two hypotheses going into the study, because I will be examining trends found in interviews with nurses and physicians, I will discuss any trends discovered in the Results and Discussion sections of this paper.

V. Methods

Research Design

To understand and analyze the relationship between nurses and physicians, I conducted 27 semi-structured, in-depth interviews. The intention of this study was to determine how nurses and physicians perceived their relationship not just with each other but with members of their own professional groups as well. Thus, a survey with questions and responses pre-determined by

myself would not have allowed interviewees to adequately voice their opinions with anecdotal evidence and would not have allowed me to recognize the emotions present in their responses. Because of this, semi-structured, in-depth interviews were conducted with a basic question guide being used to help keep the interview on track.

Site and Sample

This study utilized nurses and physicians from both the Atlanta area as well as the South Florida area due to my connections with medical personnel in both locations. Using these prior connections, sampling was conducted via personal contact, email, and text message. Snowball sampling was then used to recruit further study subjects. The unit of analysis in this study is the medical personnel at various hospitals in Atlanta and South Florida ranging from recently graduated to about to retire. Only nurses and physicians were included in this study, any other medical staff was excluded.

To assess the relationship between nurses and physicians, I focus on participant's thoughts on teamwork in the medical field, how long the participant has been working at their current institution, what the participant likes and dislikes about the institution, participant's perceived relationship with colleagues, how much work the participant thinks he or she does, and whether the participant knows of any team building resources being provided by the hospital administration. Participant's thoughts on teamwork was a focus because effective collaboration between nurses and physicians has been shown to improve the quality of patient care as well as patient health outcomes whereas ineffective collaboration decreases the quality of patient care and often leads to increased mortality rates (Tang et al 2013: 292). As discussed earlier in this paper, Wheelan et al's theory on how groups develop indicates that greater communication allows for the creation of stronger relationships. Thus, another focus was how long each

participant has been working at their current institution. Each participant's opinions regarding their current institution was another focus because it allowed me to gain insight into the similarities and differences between nurses and physicians when it came to their job satisfaction. Again, as discussed earlier this paper, the better the relationship is between nurses and physicians, the more likely individuals in both professions will enjoy their time in their respective career (Khowaja-Punjwani et al 2017: 2). Thus, another focus was each participant's perceived relationship with his or her colleagues in the medical field. Each participant's thoughts on how much work he or she does was another focus because it gave me insight into how much importance nurses and physicians placed in their own and each other's professions. Lastly, whether participants knew of any team building resources being provided was the last focus because it allowed me to see whether hospital administrations had different levels of communication with different professions.

My sample consists of 27 participants, 14 nurses and 13 physicians. Each participant is at least eighteen years old and has graduated from either nursing school or medical school. Most the nursing sample is female (12) whereas most of the physician sample is male (10). I do not anticipate this compromising my data, however I would have preferred a more diverse population. As this study is examining the relationship between nurses and physicians, this clear disparity may serve as an indication of the role gender plays in the defining of power dynamics in the workplace as well as career choices.

Data Collection

Participants were recruited through my own networks in the Atlanta and South Florida medical communities via personal contact, email and text message. Potential participants were instructed to contact me if they were interested in participating in the study. Snowball sampling

was used to recruit further study subjects. For the interviews, we met in a mutually agreed-upon place off hospital premises. Prior to the start of each interview, I discussed informed consent with the participant and asked if he or she had any questions or concerns. After this discussion, all participants signed a consent form. Interviews lasted between 10 minutes and one hour and consisted of a variety of questions. Question topics included how long the participant had been working at his or her current hospital; if there was a particular reason the participant chose to come to his or her current hospital versus a teaching/non-teaching hospital; what the participant liked about his or her current hospital; what the participant disliked about their current hospital; the participant's relationship with his or her fellow nurses/physicians; why the participant thought the relationship with his or her fellow nurses/physicians was what it is; the participant's relationship with the other nurses/physicians; why the participant thought the relationship with the other nurses/physicians was what it is; how much work the participant thinks he or she does; if the participant considers nurses and physicians to be on the same team; if the hospital administration has provided any team building resources to further facilitate the relationship between nurses and physicians; and how the participant would rank his or her working experience on a scale from one to ten. Because these interviews were semi-structured, they all went differently and I asked different follow-up questions based on the participant's previous answers.

Data Analysis

Each interview was recorded and transcribed. ExpressScribe was used to transcribe the audio recordings. To analyze the transcriptions, I used MAXQDA, a qualitative data analysis software. The interviews were coded into five categories: opinions on system/hospital, nurses' view of self and role, physicians' view of self and role, nurses' opinion of physicians, and

physicians' opinion of nurses. After developing the five categories, I conducted an inductive analysis, reviewing groups of selected responses in each of the five categories to develop a secondary list of codes. This inductive analysis allowed for the observation of patterns and trends based on each of the subjects' responses (Miles and Huberman 1994). Each analysis helped me with adding, deleting, and revising codes; this allowed me to create a reflective and relevant code system.

After the inductive analysis, my data consisted of the opinions on system/hospital, nurses' view of self and role, physicians' view of self and role, nurses' opinion of physicians, and physicians' opinion of nurses with 56 individual sub-codes. The sub-codes that could be separated into the further subheadings of Positive and Negative under each of the 5 main codes were organized as such. After organizing the data, I reviewed the transcriptions for any trends in how the codes were applied to participants.

VI. Results

To better describe my findings and help readers more easily differentiate between types of participants, I have provided a pseudonym guide for my participants. If the participant's name begins with the letter A through N, the participant is a nurse. If the participant's name begins with the letter O through Z. the participant is a physician. Table 1 provides a further breakdown of the participants.

Table 1: *Participant Pseudonyms Matched with Profession, Gender, and Years Working*

Participant Pseudonym	Profession	Gender	Years Working
Alexander	Non-teaching nurse	Male	14
Brian	Non-teaching nurse	Male	11
Catarina	Non-teaching nurse	Female	3
Daniella	Non-teaching nurse	Female	8
Emma	Non-teaching nurse	Female	17
Felicia	Non-teaching nurse	Female	10

Gabriella	Non-teaching nurse	Female	7
Harmony	Non-teaching nurse	Female	6
Isabella	Teaching nurse	Female	4
Jaclyn	Teaching nurse	Female	3
Kristen	Teaching nurse	Female	1
Lily	Teaching nurse	Female	5
Madeline	Teaching nurse	Female	4
Nadia	Teaching nurse	Female	5
Olivia	Non-teaching physician	Female	4
Peter	Non-teaching physician	Male	9
Quinn	Non-teaching physician	Female	4
Robert	Non-teaching physician	Male	5
Sean	Non-teaching physician	Male	21
Tom	Non-teaching physician	Male	13
Uberto	Non-teaching physician	Male	20
Victor	Teaching physician	Male	4
Will	Teaching physician	Male	12
Xia	Teaching physician	Female	2
Yousef	Teaching physician	Male	4
Zack	Teaching physician	Male	8
Zane	Teaching physician	Male	37

Age of Physicians: Modern Focus on Teamwork in Medicine

H1: I expect that nurse participants will perceive their relationships and interactions with younger physicians who have been exposed to inter-professional education programs and the overall culture of working with nurses throughout their career as more positive than their relationships with older physicians and that younger physicians will perceive their relationships and interactions with nurses as more positive than older physicians.

My first hypothesis had some support but was overall not supported upon further analysis of the responses. First, when participants were asked whether they thought younger physicians were more respectful towards nurses than older physicians, the hypothesis was supported by their experiences. Nurse Madeline was one such participant who claimed to have a better relationship

with younger physicians who have more recently gone to medical school as they were more respectful towards nurses and more willing to work on teams than older physicians:

> Yeah I would definitely say I have seen that and I think it's the same with nurses. We have things that they talk about all the time like "let's do this because it's the best for the patient, it's the newest research," not "because this is the way we've always done it," I see that with nurses who have been nurses for 25 years and still do things a certain way. You definitely see that older staff members have a different outlook on things, the younger generation has a more open mind but that's kind of what it looks like. **–Madeline**.

Nurse Madeline asserted that younger individuals were more willing to try new things, such as initiatives promoting inter-professional education programs and the culture of working with nurses as a team. However, further responses to the same question suggested otherwise. In an interview with Dr. Zane, he supported the idea behind the hypothesis as he believed younger physicians have better relationships with nurses than physicians who were trained prior to the shift towards team-based medicine. However, he also provided his own insight into what else impacts how physicians treat nurses, as the following except shows:

> There's no question, but it also depends on the personality of the physician, if you are not used to considering the nurse as being part of your team because that's the way you grew up, then it's harder to slowly get used to that change in mentality. I will say that I think, in general, foreign physicians, because of the way they're trained, more than anything else, may not adapt as well, depending on their personalities, to the concept of a team approach than physicians who have grown up inside of this culture inside of the United States, for example. **–Zane**

Dr. Zane's response supported the idea behind the hypothesis but he also believed there is far more than just whether a physician had been exposed to team-focused medicine initiatives throughout his or her training and career when it comes to whether a physician will have a good relationship and interactions with the nursing staff. Another participant, Dr. Olivia, stated something similar in her interview when she said the following: "[Hospitals] just want to get the work done. Team building comes from your personal interaction."

Many of my interviews with nurses and physicians touched on employee pledges. Employee pledges focuses on the following five tenants: we will treat each other the way we want to be treated, we will cultivate a spirit of inquiry, we will defer to each other's expertise, we will communicate effectively, and we will commit to these behaviors in support of healthcare care transformation. I was curious whether physicians who had trained under such guidelines and currently worked at an institution with them believed they had any influence on how physicians treat nurses. When I asked Dr. Zack, who had been working for 8 years, about his thoughts regarding employee pledges, this is what he told me:

> I mean I've read it, it feels a little hokey and something that we should be doing anyway. I think it's good that the institution is saying, "look we need to focus on these things," but I think that you read what it is and it's probably the type of things that we should be doing anyways. I think it's good to put an emphasis on that and keep the focus on collegiality and keeping patient care first and trying to respect everybody but I think the old-school mentality where the doctor was in charge and had the final word, that's not really the case anymore and kind of the model that we have now where there are a lot of NPs and PAs that are driving a lot of the direct care on the patients, you know everybody has their say in what we're doing. **–Zack**

Most participants believed that employee pledges are an initiative that does not have a real impact on how physicians treat nurses, rather it along with pledges at other hospitals are propaganda tools used by administrations to avoid dealing with the task of improving the relationship between nurses and physicians. Dr. Zack suggested something interesting, while these initiatives being put forward by hospital administrations are coming from a good place, they are emphasizing something that is slightly outdated and quite frankly, obvious. Rather than focus on a pledge all employees are repeatedly reminded of, participants commented that they would rather see hospital administrations hold the few employees creating a poor work environment accountable. Nurse Nadia expands on this in the following excerpt:

> I've read the pledge 15,000 times because they make you go to all these classes and stuff, sadly though because of what I think is the structural organization of how medicine

> usually works of like doctors are the top, nurses in the middle, then there's the ancillary staff after that, I've never seen - well the way the pledge works is there is all these things you're supposed to do and if someone doesn't do it, you can confront them nicely and say hey this is not pledge-like behavior… I don't know anyone who has ever had one of those and most people think it's a joke, like everyone was so mad that [the hospital's] answer to bullying was them saying they have a zero tolerance for bullying which is great, but making everyone sit through a 6 hour long class when 95% of the people in the room had never bullied anyone was not okay but [the hospital] did it because it made them feel better because they thought they had addressed the issue. So everyone is mad because they feel like they are being punished for not doing anything when they wished that the nursing administration would deal with the 2 nurses that are mean and the 2 doctors who are rude, and then we all go on and have a better work life. Most people think that it's a cop out. **–Nadia**

Nurse Nadia and other participants believed that the pledges hospital employees take do not actually make a difference in the workplace and are perceived as a joke by many. The following excerpt from Nurse Lily's interview adds to this: "if you asked the administration if they thought they [provided team building resources] they would say yes, but I think the reality is no." The general opinion shared among most participants is that the resources hospital administrations provide work far better as public relation stunts than they do as tools to improve work relationships in hospitals. Rather than force meaningless initiatives upon nurses and physicians, participants believed that the administration should focus more on acting and implementing programs where nurses and physicians must work together instead of simply telling them to work together, all the while holding individuals accountable if they do not act appropriately. When I asked Nurse Kristen whether she thought the age of a physician played a role in the quality of the relationship and interactions with the nursing staff, her response did not support the first hypothesis:

> I can't really say age because obviously the attendings are older than the residents but I feel like they are being taught the same thing. Like I know [the hospital] has what's called intentional rounding where they all go in and meet with the patient at the same time and discuss care, but I have not been a part of that so I have to assume that it's happening… I feel like those habits are being taught to the new residents as well. **– Kristen**

Intentional rounding, more commonly known as interdisciplinary ward rounding, is one such example of an initiative where hospital administrations are acting rather than just talking but according to Nurse Kristen, it is an initiative that is not occurring often enough and needs to become more common for medical professionals to witness the benefits firsthand. However, Nurse Kristen brought up another very interesting point; these initiatives impact every physician, regardless of age or level of training. This ties back into Dr. Zane's response where he states that the personality of the physician plays a role in how he or she will treat the nursing staff and that if a physician is "not used to considering the nurse as being part of [his or her] team because that's the way you grew up, then it's harder to slowly get used to that change in mentality." Many participants believed that the personality of a physician plays a role not just in the perceived relationship between nurses and physicians but also in whether these teamwork initiatives will work as they are intended.

My first hypothesis was not supported upon closer analysis of the coded data as well. When looking at which physicians responded with positive views regarding nurses, specifically that communication with nurses is important to them, that they are on the same team as nurses, that they listen to nurses, and that they respect nurses, the variety of individuals was astonishing. The age of the physicians with such positive views ranged from working for 2 years all the way to working for 37 years. Older physician participants who were working before the increased emphasis on teamwork in medicine arose were just as likely to perceive their relationship with the nursing staff as good and respectful as the younger physician participants who have been exposed to team-based medicine throughout their training and careers. As the data is qualitative and comes from a small sample size, I am unable to prove or disprove my hypothesis but overall, the experiences and beliefs held by participants of this study suggest that the age of a physician

and whether he or she has been exposed to inter-professional education programs throughout his or her training and career neither influences how nurses will perceive their relationship and interactions with said physician nor how physicians will perceive their relationship and interactions with nurses, not supporting my hypothesis.

Age of Physicians: Change in Workplace Dynamic

While analyzing the data, I observed that older physicians were the only participants with positive things to say about hospital administration teamwork initiatives. I believe that this may be because these physicians witnessed the change in the nurse-physician workplace dynamic and the benefits that resulted from greater teamwork over the years firsthand. First, when looking at which participants believed hospital administration teamwork initiatives worked, only two participants in the entire study came up, namely Dr. Uberto and Dr. Zane. Dr. Uberto had been working at his current hospital for 20 years and Dr. Zane had been practicing for 37 years. These two physicians were some of the oldest in the entire participant population. When I spoke to Dr. Uberto about his experience with the hospital administration, his answer was very positive and explained that he believed teamwork initiatives work and promote a good relationship between the nurses and physicians, as can be seen in the following excerpt:

> The joints and the connection between the body are the most important thing and the joints between me and the nurses are the directors, they have good directors here, I get along with most of them, and when there are conflicts between me and any of the nurses, we sit down and solve it. Yes, the hospital provides good leadership and good appreciation of our business and they work with the nurses when they are not at their best performance. And there is a nursing committee here for when anything goes wrong, as much as a peer review we have a nursing peer review too. **–Uberto**

Dr. Uberto describes a system where the administration acts as an intermediary in discussions between employees while also holding them accountable, something that many participants in this study claimed they wanted to see. But then the question arises, why don't younger

physicians at the same or similar institutions have positive things to say about the teamwork initiatives? Dr. Uberto and Dr. Zane worked at very different institutions and yet they were the only two participants to have positive things to say about the teamwork initiatives. I believe that their shared experience of working during a time when nurse-physician teamwork was not present, let alone emphasized, allowed them to bear witness to the drastic shift in the relationship between nurses and physicians and understand that the teamwork initiatives being implemented have worked and resulted in better workplace relationships and patient outcomes. The following excerpt from Dr. Zane's interview elaborates on this further:

> This whole concept of teaming for patient care is a relatively new one, arising maybe in the early 2000s. It arose because there were bad outcomes that occurred when there was no communication between specialties, between nurses and physicians, and between physicians and physicians. It became clear to the healthcare industry that there needed to be more of that and hence this concept of a team approach to patient care became more fashionable. I think it's an important and useful concept and very critical simply because you have more eyes looking at the patient… you have fewer miscalculations and mistakes made because of the multiple eyes that are looking at the patient. One person can't do everything which is what we thought originally, now obviously we've been taught that that is not the case. **–Zane**

Dr. Zane explains why teamwork initiatives in medicine came about and why he believes they are important. Before teamwork between nurses and physicians was emphasized, Dr. Zane stated that physicians were taught that they could do everything alone and that there was no need to work with the nursing staff. Most participants believed that the relationship between nurses and physicians has improved in recent years, as the following excerpt from Nurse Felicia, illustrates:

> I can remember one experience early on in my career, a physician had ordered Lasix on a patient but did not order potassium and the patient's potassium level was fine. The physician later came to the floor, found me, and said "are you trying to kill my patient," the physician had only ordered the Lasix and did not order any potassium and placed all the blame on me, saying "you should have called me back and told me that I didn't order the potassium"… I don't think things like that happen as much now but it certainly did back then. **–Felicia**

Nurse Felicia's personal experience describes a time during the transitionary period where nurses were starting to have more responsibility in hospitals and were working more closely with physicians. The push towards teamwork in hospitals resulted in improved perceived relationships between nurses and physicians over time, something Nurse Felicia interestingly only attributed to physicians "recognizing that nurses spend 12 hours a day with [patients and that they] could have [their] back and give [them] everything [they] need to know as opposed to being adversarial."

The following question then arises: why do no nurse participants have anything positive to say about hospital administration teamwork initiatives even when they recognize an improvement in the relationship and interactions between nurses and physicians? While one potential explanation could be that the oldest nurse participant in the study had been working for 17 years, twenty years less than the oldest physician participant, I believe that a potential reason is a lack of communication between hospital administrations and nurses. According to Nurse Nadia, "the structural organization of how medicine works is that doctors are on the top, nurses in the middle, then ancillary staff after that," which could mean that physicians have a closer relationship with the hospital administration. This could result in physicians being more aware of changes in how they are supposed to work with the nursing staff as mandated by the administration. However, the nursing staff would not be aware of this shift in focus and would not notice or perhaps not fully understand the slowly changing relationship between nurses and physicians. Nurse Nadia had more to say about her perceived lack of communication, as can be seen in the following excerpt:

> In a hospital administration, it's very much set up as there is a chief nursing officer, then there's the nursing administration, and there's like a whole subset of office people that all they do is manage nurses, they're nurse managers. There's like all this stuff that is completely separate structurally from what the doctors do… all the decisions are made by

> the medical officers and the medical staff and I don't know how much those people communication but it doesn't feel like they communicate that often at least in how it translates to us, but it's like they're completely separate structurally and that is how they are in real life. They do their job and we do our job and it's supposed to be interdisciplinary, at least that's what we learn about in school. **–Nadia**

This perceived lack of communication could be the potential reason no nurse participants in this study thought that hospital administration teamwork initiatives work or even exist. Nurse Felicia, one of the few nurse participants who worked during the time before this emphasis on teamwork, explained this culture change via physicians simply realizing that, "nurses spend 12 hours a day with [patients and that they] could have [their] back and give [them] everything [they] need to know as opposed to being adversarial," potentially because she was never aware of the teamwork initiatives in the first place.

Age of Nurses: Interpersonal Relationships with Physicians

H2: I expect to find that nurses who have been in a department for a long time will describe having a more positive relationship and better interactions with physicians than nurses who have been in a department for a shorter amount of time.

My second hypothesis was supported by the findings of this study. First, when looking at which nurse participants claimed to have good communication with the physicians, the three nurses that made such claims were the three oldest nurse participants in the study. This finding suggests that the longer a nurse spends at an institution, the more time he or she has to get to know the physicians which results in better perceived relationships and interactions. The following excerpt from Nurse Emma elaborates on this phenomenon:

> They all know me, some of them I know by first name, some of them I have their cell phone number and we text back and forth and chit chat about things sometimes. Some of the newer [physician] staff coming in are very nice but we haven't yet established that same back and forth banter with some of them where we can really talk to them as colleagues but for the most part, I know the majority of the main physicians that come

> here and I can call them up and say, "hey listen, I need X, Y, and Z for this patient," and for the most part they're going to understand what I need. **–Emma**

Nurse Emma had been working at her current institution for 17 years, the longest out of the nurse participant population. As the excerpt from her interview shows, she claimed to have established a near friendship with many physicians during her 17-year tenure but it's her statement about the newer physician staff that truly supports the hypothesis. Despite her spending a little under two decades at the same hospital and having great relationships with many of the older physicians, she still needed to take time to create these relationships with the newer physicians. Nurse Emma's experience suggested that the more time nurses and physicians spend together, the closer they will become and over time they will learn how to communicate with one another effectively, leading to better relationships and improved patient outcomes. Knowing how to communicate with one another plays a huge role in the quality of relationships and interactions between nurses and physicians. Nurse Alexander, who had been working at his current hospital for 14 years, talks about his ability to communicate with physicians effectively due to his extensive work experience in the following excerpt:

> I've been here 14 years, I've built up plenty of relationships with doctors, know most of them by their first names but I don't call them by that. I know what to say to some of them and what not to say to some of them, what things I should call them about and what things I shouldn't bother them with because some things aren't pertinent to certain doctors. The nurses that aren't experienced enough don't know what to call about and what not to call about. **–Alexander**

Nurse Alexander's experience suggests that nurses become more adept at communicating with physicians the longer they work at an institution. The hypothesis is supported based on Nurse Emma and Nurse Alexander's experiences where perceived nurse-physician relationships and interactions improve with time and increased work experience.

The increased use of technology in medicine lends further support towards my hypothesis. Previous literature has shown that technology has resulted in a decrease in face-to-face communication between nurses and physicians, with patient orders being entered on computers by physicians and the nurses carrying them out. Nurse Nadia talks about her opinion on how the use of technology limits the quality of the relationship between nurses and physicians in the following excerpt:

> I feel like they don't always take the time to appreciate that we're the ones who are implementing everything they ask us to do, it's like they just forget that a nurse has to do it, they just write the order in the computer and then at the end of the day it magically got done, that's how it feels. –**Nadia**

Based on Nurse Nadia's experience, technology limits the interactions between nurses and physicians, resulting in relationships being harder to develop. The findings suggest that the limited interaction caused by technology results in a longer amount of time needed for a good relationship to develop.

Another angle of looking at this could be that nurses who have been working for a long amount of time may have more confidence in their abilities. This increase in perceived confidence might result in nurses feeling more comfortable communicating their opinions regarding a patient to physicians, leading to better communication, better relationships as the physicians recognize the importance and usefulness of the nurse, and better patient outcomes. The following excerpt from Nurse Brian, who had been working for 11 years, provides an example of this increase in perceived confidence over time:

> I have a good relationship with the doctors, I feel as if I am fairly knowledgeable of my job so when I talk to them I know what I am talking about. If there is a problem and I don't agree with the doctor's opinion, I can go to them and say, "are you sure this is what you want," so for the most part I don't have a problem with communicating with them and interacting with them. –**Brian**

Nurse Brian's experience suggests that the more experienced a nurse is, the more confident he or she will be, resulting in more collegial relationships between nurses and physicians.

Once again, as the data is qualitative and comes from a small sample size, I am unable to prove or disprove my hypothesis but overall, the participants' experiences supported my hypothesis that nurses who have worked for a longer amount of time describe having more positive relationships and interactions with physicians than nurses who have worked for a shorter amount of time.

VII. Discussion

The findings discussed in this study provide an examination of what might influence the quality of the relationship between nurses and physicians. First, I looked at whether nurse participants had a more positive perception of their relationship and interactions with younger physicians than their relationship and interactions with older physicians, whether younger physicians had a more positive perception of their relationship and interactions with nurses than older physicians, and the perceptions nurses and physicians have of current hospital administration teamwork initiatives. Second, I observed that older physician participants had more positive things to say about hospital administration teamwork initiatives. Lastly, I looked at whether nurse participants who had been in a department for a long time described their relationship and interactions with physicians as more positive than nurse participants who had been in a department for a shorter amount of time. My analysis adds to previous literature as it examines the perceptions and experiences of nurses and physicians about their working relationship.

My first hypothesis was not supported by the findings of this study. Many participants agreed that there were other factors besides the age of a physician or how much he or she has

been exposed to inter-professional education programs when it comes to how positive a nurse-physician relationship is perceived as. One potential factor suggested was the personality of a physician. The personality of a physician as a factor makes sense when thinking about it via Tang et al's five determinants of the quality of nurse-physician relationships, especially with communication being the most important determinant, because the amount a physician communicates with the nursing staff is dependent on the physician's personality. At the end of the day, no amount of exposure to inter-professional education programs can convince a physician to work with nurses as a team if he or she truly does not want to. Even in the case of interdisciplinary ward rounds, if a physician does not value the opinion of the nursing staff and is not willing to communicate with them, even if they are on the same rounding team, the physician is not obligated to listen to the opinions of the nursing staff because the end decision is made by the physician. Many physicians in the United States have been exposed to team-based medicine and understand the benefits of it, but it is their personality and preconceived opinions that determine whether they comply with teamwork initiatives being put forward by hospital administrations. Additionally, I analyzed the perceived effectiveness of these different teamwork initiatives, something lacking in previous literature. Participants did not have a positive perception of initiatives that are forced upon staff members, such as employee pledges and other such guidelines that simply tell individuals what to do, and generally agreed that they are not taken as seriously or are as effective in improving nurse-physician relationships and interactions as initiatives that mandate nurses and physicians work together, one example being interdisciplinary ward rounds. The perceived effectiveness of interdisciplinary ward rounds is consistent with Wheelan et al's theory of the five stages of developing group growth, specifically the third stage of increasing collaboration and teamwork. The more face-to-face interaction

nurses and physicians have with one another, the more their relationship will grow and the more they learn to rely on each other's skill sets to provide superior patient care.

While analyzing the data, an interesting trend was found. The only two participants in the entire study that had something positive to say about hospital administration teamwork initiatives were the two oldest physicians in the study population. Considering Stein et al's research on the history of the nurse-physician relationship, this finding makes sense as these older physicians worked during a time when nurses were not allowed to give their opinions regarding a patient, rather they were simply expected to follow the physician's orders. While Stein et al does say that the relationship between nurses and physicians during this time was good, a very clear hierarchy was present and patient care suffered as nurses "were not supposed to give suggestions to the physicians even when it would directly benefit the patients" (Stein et al 1990: 546). Having lived through the transitionary period and witnessing the changes Stein et al talk about in their follow-up paper from 1990, these older physicians understand that the teamwork initiatives put forward by hospital administrations have worked as they have been operating in the medical field long enough to see the difference. Perhaps an even more interesting finding was that no nurses had anything positive to say about hospital administration teamwork initiatives. The research conducted by Lucie Michel supports this finding as she found that nurses would only interact with other nurses and would not talk to the administration, nurse assistants, or physicians unless necessary for the care of a patient, which she believes may "discourage fluid communication" (Michel 2017: 712). This corroborates with what Nurse Nadia claimed in her interview when she said she believed there was a distinct lack of communication. Thus, a potential explanation for this finding is that nurses are not aware that the changes they may or may not have noticed in their relationship and interactions with the physicians were caused by efforts made by the

hospital administration. Instead, the nurses that have recognized a shift in the nurse-physician dynamic chalk it up to physicians recognizing the benefits of working with the nursing staff, which is only part of the explanation.

My second hypothesis was supported by the findings of this study. The finding that nurse participants who have been in a department for a long time describe having more positive relationships and interactions with the physicians than nurse participants who have been in a department for a shorter amount of time can be explained by Wheelan et al's theory of the five stages of developing group growth. The more time nurses and physicians spend together, the more stages they will be able to advance through. After many years of working at one institution, it makes sense that a nurse who has had enough time to get to know the physicians would have advanced to the point where he or she feels comfortable interacting and communicating with the physicians, a trait the findings suggest younger nurse participants lack. The findings also suggest that nurse participants have increased levels of perceived confidence in their abilities with more working experience. This is consistent with Tang et al's fourth determinant of nurse-physician relationships where nurses and physicians prioritize different tasks. Specifically, physicians get irritated when younger nurses do not understand why the physicians prioritize certain tasks. Thus, I believe that nurse-physician relationships could be drastically improved if nurses received more education and training before joining the workforce, giving them increased time to become more knowledgeable and more confident in their abilities. The increased levels of perceived confidence found in more experienced nurse participants is also consistent with Tang et al's fifth determinant of equal power. The difference in power between nurses and physicians may decrease when nurses are more confident and thus more comfortable discussing patient care with physicians. The increased use of technology in medicine and the negative impact it has on

nurse-physician relationships was also researched by Lucie Michel and she found that it limits the amount of face-to-face interaction nurses and physicians have, decreasing the quality of the relationship between nurses and physicians. Thus, it is possible that this vast use of technology results in nurses and physicians in the United States taking longer to develop a good relationship than it would if technology was used less.

This study is not without its limitations. One of the most prominent limitations was the small population size. As both nurses and physicians have very busy schedules, recruiting participants for this study was a challenge. The small population size combined with the qualitative nature of the study prevented me from proving or disproving my hypotheses, rather I was only able to examine the perceptions and experiences of participants. There was also limited variation regarding gender as I had limited female physicians and limited male nurses. Additionally, participants were only from the Atlanta area and South Florida region, potentially skewing the data as all participants were from heavily populated areas. A larger, more diverse participant population may have allowed me to discover more patterns in the experiences of my participants. This study intended to discover major themes and patterns in the experiences of my participants and, when possible, match these themes and patterns with previously established theories. Further research with a larger, more diverse participant population is needed to make more claims regarding these patterns.

Recommendations for future research include, as stated above, using a larger, more diverse participant population, conducting an observational study, exploring potential differences between nurse-physician relationships in academic versus non-academic institutions, and exploring whether if a physician trained in the United States or another country influences how they describe their relationship and interactions with nurses. It would also be interesting to study

nurse-physician relationships from a more historical standpoint, effectively reproducing Stein et al's work in the modern medical era.

Understanding nurse-physician relationships and how to improve them is an incredibly important topic in today's rapidly aging society. I truly hope that this paper shed light on the subject so that we can make the necessary improvements to our healthcare system within the coming decade. Stein et al ended their paper from 1990 with something that I feel is still relevant in 2018, nearly three decades later: "Physicians and nurses can both benefit if their relationship becomes more mutually interdependent. Subservient and dominant roles are both psychologically restricting. When a subordinate becomes liberated, there is the potential for the dominant one to become liberated too" (1990: 549). If nurses and physicians are liberated from the culture they currently abide by and work as a team to treat our nation's sick, I believe that they will be able to accomplish far more than they do now and will have no problem treating our increasing elderly population.

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IX. Appendices
Appendix A:

Recruitment Message

Dear Dr./Mr./Ms. ___________

My name is Aneel Maini and I am an undergraduate student at Emory University pursuing an honors thesis examining nurse-physician relationships in teaching versus non-teaching hospitals. The reason I am contacting you is because I wanted to ask if you would be willing to be interviewed for this study. The interview will take 30 to 45 minutes of your time and will take place off hospital campus at any location convenient for you. Your participation is completely voluntary and everything will remain confidential. If you have any questions, please feel free to email me at aneel.maini@emory.edu.

Sincerely,

Aneel S. Maini
Emory University | Class of 2018
Biology, B.S. & Sociology, B.A.
Honors Thesis Candidate, Department of Sociology
aneel.maini@emory.edu

Appendix B:

Informed Consent Form

Study No.: IRB00099207 **Emory University IRB** IRB use only Document Approved On: 10/9/2017

Emory University
Consent to be a Research Subject

Title – "Nurse-Physician Relationships in Teaching versus Non-Teaching Hospitals "

Principal Investigator: Aneel Maini
Faculty Advisor: Dr. Tracy Scott

You are being asked to take part in a research study of how nurse-physician relationships differ in teaching versus non-teaching hospitals. You are being asked to take part because you are either a nurse or a physician in a teacher or non-teaching hospital. Please read this form carefully and ask any questions you may have before agreeing to take part in the study.

What the study is about: The purpose of this study is to learn how nurse-physician relationships differ in teaching versus non-teaching hospitals.

What we will ask you to do: If you agree to be in this study, we will conduct an interview with you. The interview will include questions about your job. The interview will take about 1 hour to complete. With your permission, we would also like to record the interview.

Risks and benefits: There is the risk that you may find some of the questions about your job conditions to be sensitive. There are no benefits to you.

Compensation: None

Your answers will be confidential. The records of this study will be kept private. In any sort of report we make public we will not include any information that will make it possible to identify you. Research records will be kept in a locked file; only the researchers will have access to the records. If we record the interview, we will destroy the recording after it has been transcribed, which we anticipate will be within three months of its taping.

Taking part is voluntary: Taking part in this study is completely voluntary. You may skip any questions that you do not want to answer. If you decide to take part, you are free to withdraw at any time.

If you have questions: The researcher conducting this study is Aneel Maini and his faculty advisor is Dr. Tracy Scott. Please ask any questions you have now. If you have questions later, you may contact Aneel Maini at aneel.maini@emory.edu. You can reach Dr. Tracy Scott at tscott@emory.edu. Contact the Emory Institutional Review Board at 404-712-0720 or 877-503-9797 or irb@emory.edu:

- if you have questions about your rights as a research participant.
- if you have questions, concerns or complaints about the research.
- You may also let the IRB know about your experience as a research participant through our Research Participant Survey at http://www.surveymonkey.com/s/6ZDMW75.

You will be given a copy of this form to keep for your records.

Consent
Please, print your name and sign below if you agree to be in this study. By signing this consent form, you will not give up any of your legal rights. We will give you a copy of the signed consent, to keep.

____
Name of Subject

____ ____________________
Signature of Subject Date Time

____ ____________________
Signature of Person Conducting Informed Consent Discussion Date Time

Appendix C:

<u>Interview Guide</u>

Nurses

1. How long have you been working at this hospital?
2. Was there any particular reason you chose to come to this specific hospital?
3. What do you like about this hospital?
4. What do you dislike about this hospital?
5. What's your relationship like with your fellow nurses?
6. Why do you think your relationship with them is good/neutral/bad?
7. What's your relationship like with the physicians?
8. Why do you think your relationship with them is good/neutral/bad?
9. If you had to give a number, what percentage of the work do nurses do and what percentage do physicians do?
10. Do you consider physicians to be on the same team as you?
11. Has the hospital administration provided any team building resources?
12. Rank your experience working here, 1 being terrible and 10 being amazing.

For physicians

1. How long have you been working at this hospital?
2. Was there any particular reason you chose to come to this specific hospital?
3. What do you like about this hospital?
4. What do you dislike about this hospital?
5. What's your relationship like with your fellow physicians?
6. Why do you think your relationship with them is good/neutral/bad?
7. What's your relationship like with the nurses?
8. Why do you think your relationship with them is good/neutral/bad?
9. If you had to give a number, what percentage of the work do physicians do and what percentage do nurses do?
10. Do you consider nurses to be on the same team as you?
11. Has the hospital administration provided any team building resources?
12. Rank your experience working here, 1 being terrible and 10 being amazing.