PHYSICIANS AS ACTIVE TEAM MEMBERS:

CHECKING YOUR EGO AT THE DOOR

by

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ABSTRACT

This thesis examines the relationship between physicians' professional socialization, and inter-professional communication. Predicted outcome value theory is used as a framework to understand how physicians' perceptions of socialization about their profession affect their perceptions of inter-professional communication. Results from multiple regressions indicate that socialization about the value of professional relationships predicts inter-professional communication. Pearson's correlations indicate that socialization about the profession's goals and values is related to physicians' identification with their profession and the organizations where they work. Physicians in this study viewed occupational identity as a part of the professional socialization process, and inter-professional communication as a part of their organizational role.

CHAPTER I

Introduction

During the last decade the roles and expectations of physicians in the United

States healthcare system have changed. In previous centuries, physicians were socialized

as autonomous healers who were "experts" in their field and solely responsible for all

aspects of patient care (Hartzband & Groopman, 2011). Physicians often held a virtual

monopoly as the principal providers of healthcare services (Harter & Krone, 2001). In

more recent times however, physicians often share in the delivery of healthcare services

due to the increasing prevalence of team-based models of patient care (Miles, 2011).

When patients receive care from a healthcare team, their physician is less likely to be an

autonomous decision maker, and more likely to be one of several healthcare providers

who engage in shared decision making with patients and other providers.

Team-based patient care has gained popularity in response to problems such as a

smaller pool of general practice physicians, growing financial challenges in medical

practices, and new regulations such as the Affordable Care Act, which places greater

emphasis on continuous communication between patients and providers. Currently,

primary care physicians make up only 32% of the healthcare provider workforce (Brown,

2013). It is estimated that by the year 2020, the United States will face a shortage of

approximately 90,000 primary care physicians (Brown, 2013). In addition to the shortage

of physicians, the healthcare industry is also facing a financial crisis. Today, medical

inflation in the United States significantly outweighs the overall rate of inflation (Foster

& Opsut, 2011), with healthcare costs rising faster than individuals' personal income (PR

Newswire, 2013). For a 12-month period from 2012-2013, medical and prescription drug

costs rose 3.5%, and medical costs rose 4.2% (PR Newswire, 2013). For this reason, legislators, employers, insurers, and providers searched for new models of healthcare that could reduce costs by increasing the coordination of care through shared delivery systems. The result has been an overhaul of the U.S. healthcare delivery system that was mandated with passage of the Affordable Care Act.

Affordable Care Act

On March 23, 2010 President Barack Obama signed the Affordable Care Act into law in an effort to reduce the costs associated with healthcare (U.S. Department of Health & Human Services, 2013), and improve public health (Democratic Policy Committee, 2010). Achieving such goals requires the improvement of the coordination of healthcare, which substantiated the need for new patient care models. These models set out to create a new healthcare workforce, by encouraging innovations in health workforce training, recruitment, and retention (Democratic Policy Committee, 2010). The Affordable Care Act is focused on developing community-based health teams to support medical home models, which in turn increase access to community-based, coordinated care (Democratic Policy Committee, 2010). Increasing the supply of healthcare workers and enhancing the education and training of such workers are key to the successful implementation of the Affordable Care Act. The law has significant implications for patients, providers, and medical educators.

Patients in the Affordable Care Act. Under the law, all Americans have access to affordable healthcare. For the first time, patients have a say in their healthcare insurance plans and have access to an online insurance marketplace where they can compare plans on an equal level. This feature allows the millions of people who were

previously uninsured to gain coverage. Additionally, insurance companies are no longer allowed to deny coverage due to an incomplete application or preexisting condition. Seniors on Medicare qualify for free preventative services, and young adults can remain on their parents' healthcare plans until 26 years of age (U.S. Department of Health & Human Services, 2013).

Providers in the Affordable Care Act. Provisions of the new law also allow healthcare providers to be reimbursed for the first time. In an effort to increase the supply of healthcare workers, school loan repayment is offered to providers who work in public health in areas where there are a shortage of health professionals (Democratic Policy Committee, 2010). Additionally, physicians will not be paid based on the number of patients they see, but will instead be paid based on the level of quality care given to such patients. Similarly, the Value-Based Purchasing program offers financial incentives to hospitals to improve quality of care, and provides further incentives to physicians who collaborate to form Accountable Care Organizations. These are coordinated groups of physicians focused on improving quality of care in an effort to reduce unnecessary hospital admissions. To enhance collaboration and improve efficiency, the law also requires a system upgrade to electronic medical records (U.S. Department of Health & Human Services, 2013).

Educators in the Affordable Care Act. Finally, the enactment of this law has further implications for medical educators. Because physician collaboration is necessary to provide improved quality care to patients, the communication skills that students learn in medical school matter when they graduate and leave the educational setting. Educators must conform to this new standard. Physician education programs need to train students

in inter-professional communication in order to graduate the most well rounded

physicians who will be able to successfully engage in collaborative care with other

healthcare providers (U.S. Department of Health & Human Services, 2013).

The American healthcare industry is in the midst of a major transformation. The

government's push toward lowering healthcare costs coupled with the shortage of

primary care physicians, confirms the need for immediate change (Worth, 2012). In an

effort to accommodate the healthcare system to the current state of the nation, the United

States is making significant changes to the system and how the population is cared for

under that system. For instance, modern healthcare now emphasizes a collaborative rather

than an individual approach to providing patient care. One example of this shift toward

inter-professional communication between physicians and other healthcare providers is

represented in the development of the Patient Centered Medical Home.

Patient Centered Medical Home

The Patient Centered Medical Home (PCMH) is designed to improve healthcare

in America by transforming how primary care is organized and delivered (Agency for

Healthcare Research and Quality, 2013). The goal of the PCMH is to build a primary care

delivery platform that the nation can rely on for accessible, affordable, and high-quality

healthcare (Agency for Healthcare Research and Quality, 2013). The conceptualization

behind this model involves creating a centralized setting wherein a team of medical

professionals such as physicians, nurses, nurse practitioners, pharmacists, nutritionists,

and social workers work collaboratively to ensure that patients receive appropriate care

where and when they need it, and in a manner that they can understand (American

College of Physicians, 2011). To achieve this level of inter-professional communication

between physicians and other healthcare providers, physicians need to be aware of their own communication behaviors and explore ways to enhance the flow of information within their healthcare teams (Demiris, Washington, & Wittenberg-Lyles, 2008). Team-based strategies ensure that the quality and continuity of care is maintained for the patient (American College of Physicians, 2011). The PCMH utilizes registries, information technology, and health information exchange to make all medical records for a single patient accessible to all members of the healthcare team (American College of Physicians, 2011). The PCMH model serves five core functions (Agency for Healthcare Research and Quality, 2013).

Comprehensive Care. First, patients receive comprehensive care from a healthcare team. The primary function of the PCMH is to meet the majority of patients' physical and mental healthcare needs, which includes prevention and wellness, acute care, and chronic care. In order for this to be achieved, more than just a single physician is required. Teams may be large and diverse, and can even exist virtually to link patients to providers and services in and around the community.

Patient-Centered. Second, a patient-centered approach focuses on relationship-based healthcare that emphasizes the patient as a whole person. Patients are encouraged to manage and organize their own care at their own level. To ensure that this goal is achieved, team members view the patient as a member of the team and in turn, the patient remains fully informed in the establishment of care plans.

Coordinated Care. Third, the model fosters clear and open communication among patients and their families, the medical home, and members of the broader team. In this way, patients' care is coordinated across the entire healthcare system between

specialty care, hospitals, home health centers, and community services. Such procedures are essential during transitional states such as discharge from a hospital.

Accessible Services. Fourth, the implementation of a team-based model allows for patients' preferences regarding access to care to be accommodated. Under the team-based model, patients will experience shorter waiting times, enhanced in-person hours, around-the-clock access to a team member, and alternative channels of communication.

Quality and Safety. Fifth, the model is committed to providing quality care by continuing to improve its practices. Improvement is nested in the ongoing engagement of activities such as utilizing evidence based medicine and decision support tools to guide shared decision-making, engaging in performance measurement, measuring and responding to patient experiences, patient satisfaction, and practicing population health management.

The medical home concept was originally introduced in 1967 by the American Academy of Pediatrics as a way to provide patient-centered care (Worth, 2012). However, the model has become increasingly popular in recent years as national organizations such as the World Health Organization and the Institute of Medicine have recognized its potential. The American Academy of Family Physicians even called the PCMH the "future of our specialty" (Worth, 2012, p. 24). The key to a successful implementation of the PCMH model relies on a strong foundational primary care workforce that includes physicians, physician assistants, nurses, medical assistants, nutritionists, social workers, and care managers (Agency for Healthcare Research and Quality, 2013). Without successful inter-professional communication the PCMH model will not be successful in achieving its intended goals.

Purpose of Study

      Health communication literature to date is predominantly focused on provider-patient interactions, with little focus on inter-professional communication between healthcare providers (Conn, Reeves, Dainty, Kenaszchuk, & Zwarenstein, 2012). Similarly, physician education programs pay little attention to teaching their students the importance of inter-professional communication (Northouse & Northouse, 1998; Rogers, Lingard, Boehler, Epsin, Mellinger, Schindler, & Klingensmith, 2013). Therefore, medical students often rely on supervising physicians as role models from whom they learn inter-professional communication skills (Rogers et al., 2013). Given that physicians have traditionally dominated the power structure of healthcare (Northouse & Northouse, 1998; Villagran & Weathers, 2014) and their individual beliefs and values about the profession are likely to reflect that hierarchy, it is worrisome that they may be medical students' only source of information regarding inter-professional communication. Additionally, this type of observational learning could be detrimental if the observed faculty member is untrained or employs behaviors that are no longer appropriate, such as a paternalistic approach to healthcare (Rogers et al., 2013).

      Medical students learn what it means to be a physician by interpreting information they receive from those around them (Simpson, 1967). They then use such interpretations to form their professional identities (Simpson, 1967). With modern healthcare relying on successful inter-professional communication as a foundation for models such as the PCMH (Agency for Healthcare Research and Quality, 2013), it is important for physicians to break hierarchical barriers, and be open to teaching and learning communication skills that enhance inter-professional interactions.

The purpose of this study is to examine physicians' perceptions of their professional identity as a factor related to the predicted value of inter-professional communication with other healthcare providers, as well as overall identification with their profession and organization. The predicted outcome value theory is used as a lens through which I examine how physicians' perceptions of socialization about their profession's history, language, goals and values, relationships, and occupational identity affect their collaboration with other providers when providing patient care. This study adds to the body of communication literature by combining Jablin's (2001) organizational socialization model with Sunafrank's (1986) predicted outcome value theory. The interplay of physicians' professional socialization and their subsequent perceptions of inter-professional healthcare communication is examined in a manner that expands Sunnafrank's theory beyond initial interactions.

This chapter introduces the terminology used in the study, and presents the basic principles of the theoretical framework adopted in the present study. Specifically the following sections are meant to familiarize the reader with predicted outcome value theory, as well as define healthcare providers, professional socialization, and inter-professional communication.

Definitions

This section will identify and define the terminology used in the study. Specifically, this section will define healthcare providers, professional socialization, professional identity, and inter-professional communication. A comprehensive review of literature surrounding these variables will be presented in chapter two.

Healthcare Providers

The term "healthcare provider" (HCP) is used broadly to reference medical

professionals including but not limited to physicians, nurses, nurse practitioners, physical

therapists, social workers, technicians (Hartzband & Groopman, 2011), clinicians,

paramedics, and anyone in the business of caring for people (Villagran & Weathers,

2014). The term was originally designed to include all healthcare professionals who

examined patients independently such as physicians, physician assistants, and nurse

practitioners (Ofri, 2011a), thereby accounting for the idea that they were interchangeable

(Hartzband & Groopman, 2011). With time, the term expanded to include all healthcare

professionals contributing to patient care. Regardless, all "providers" share a

responsibility to interact in ways that promote patient satisfaction, and lead to optimal

health outcomes (Villagran & Weathers, 2014).

Professional Socialization

When individuals are new to an organization, they must integrate themselves into

the culture of that organization through a process called organizational assimilation

(Jablin, 2001). This study focuses on an individual's integration into life as a physician, a

profession that affords members a higher status in society that is associated with nobility,

purity, and sovereignty, notions which are drawn from preconceived ideas that extend far

beyond the bounds of the organization where the physician is employed (Real, Bramson,

& Poole, 2009; Starr, 1982). According to Kuhn and Nelson (2002), collectively

generated identity types such as "physician," "attorney," and "professor" are produced

through social interaction. Professional socialization for physicians includes information

about the day-to-day job of a physician, as well as the perceived status, culture,

autonomy, and intelligence that comes with being a physician, or as Wagner, Hendrich, Moseley, and Hudson (2007) state, "all of the rights and responsibilities that [the profession] entails" (p.288). The organizational assimilation process is used as a framework to understand the professional socialization process that integrates physicians into their professional roles. Thus, this process is termed "professional socialization" in this study. For the purposes of this study, the professional socialization process continues to evolve throughout the physician's education and training, residency, and subsequent role as a practicing physician. The three stages of the professional socialization process are anticipatory socialization, encounter, and metamorphosis (see Figure 1).

Anticipatory socialization is the first phase in this process, when newcomers form expectations about particular occupations. For example, medical students form expectations about what it means to be a physician. According to Jablin (2001), information about a profession is gathered intentionally and unintentionally, and it is this information that socializes individuals even before they become members of a particular profession. Thus, it is fair to say that the information medical students receive during their education, socializes them into the profession before they even become physicians.

Encounter is the second phase of professional socialization. During this phase individuals enter life on the job and must make sense of the professional culture based on information received through formal orientation programs, training programs, formal mentoring, and informal mentoring (Jablin, 2001). During the final two years of medical school, students learn at the bedside of actual patients (Groopman, 2007; Korsch, & Harding, 1997). Shortly thereafter, medical students become medical residents when they graduate from medical school, but are not yet eligible to be licensed physicians (du Pre,

2010). It is during this time that they enter programs of residency and receive formal and informal training from supervising physicians.

During physician education, students define and develop their roles based on interactions with their "leaders" or supervising physicians (Graen, 1976). This study presumes that this role development process takes place during the encounter stage of professional socialization. Physicians define and develop their professional roles in three phases. During the *role-taking phase* a supervising physician assigns the student specific tasks, observes how the student responds, and evaluates the student's skills and motivation (Graen & Scandura, 1987). In the *role-making phase*, the supervising physician and student exchange resources as the student becomes a resident and begins to take on more responsibility with assigned tasks (Graen & Scandura, 1987). Finally, in the *role-routinization phase*, the resident's role is well-developed and understood by both parties. It is important to note that a single supervising physician may develop different types of relationships with different residents (Graen & Scandura, 1987).

For the purposes of this study, it is suggested that these relationships can take on an individualistic or collaborative approach to providing patient care. An individualistic approach depicts the resident as that of an "out-group" member (Graen & Scandura, 1987). This relationship is characterized by low levels of trust, rewards, and the use of formal authority rather than mutual influence between resident and supervising physician (Fairhurst & Chandler, 1989). A collaborative approach depicts the resident as more of an "in group" member (Graen & Scandura, 1987). This relationship is characterized by high levels of trust, mutual influence, support, and the exchange of rewards between the resident and supervising physician (Fairhurst & Chandler, 1989). The approach that these

relationships adopt likely impacts residents' depictions of their professional role as physicians, which thereby accounts for how they communicate with others when they become physicians.

Metamorphosis is the final phase in the professional socialization process. This is when the individual changes their behaviors and expectations to match the standards of the profession (Jablin, 2001). For example, medical residents will likely alter their behaviors to match information received from physicians around them. Thus, the communicative behaviors of supervising physicians during physician training likely impact students' impressions about the overall profession.

Professional Identity

During the professional socialization process, medical students learn what it means to be a physician, make judgments about such information, and eventually internalize that information in a way that is consistent with other physicians (Simpson, 1967). It is through this process, that medical students form a professional identity (Simpson, 1967). For the purposes of this study, a professional identity is made up of an individual's perceptions of their profession's history, language, goals and values, and the importance of professional relationships, as well as an occupational identity (see Figure 2) (Chao, O'Leary-Kelly, Wolf, Klein, & Gardner, 1994).

History. As medical students, future physicians are familiarized with the history of their profession. A history may be comprised of traditions, customs, myths, and/or rituals that govern the physician profession. Acquiring this cultural knowledge is important for future physicians as it teaches them which behaviors are appropriate or inappropriate in specific interactions and circumstances (Chao et al., 1994; Schein, 1968).

Language. Language refers to an individual's knowledge of the profession's technical language and knowledge of acronyms, slang, and jargon unique to the profession. Physicians not only learn a distinct academic language or vocabulary, but they also acquire a thought process unique to their profession (Davidson, 2011). Students are explicitly taught the characteristics and specific elements of this language early in their studies to promote critical thinking (Davidson, 2011). This vocabulary serves as foundational knowledge for physicians that enables them to understand information from and communicate information to other HCPs (Chao et al., 1994).

Goals and Values. In order to become fully socialized into their roles, physicians must learn the rules that maintain the integrity of their profession. Rules may be spoken or unspoken, and may include information relating to group norms and informal networks. This process allows new physicians to connect themselves to the larger physician role and all that comes with their title (Chao, 1994; Feldman, 1981).

Relationships. Being a physician requires individuals to maintain interpersonal relationships with those around them including patients and colleagues. Physicians become socialized into their professional role by forming relationships with senior physicians from whom they learn important information such as common personality traits and group dynamics (Chao et al., 1994). This process is crucial as the relationships physicians form affect how they will be accepted by other physicians. Although Chao et al. (1994) refer to this dimension as being about individual people, the attending scale items actually assess the more dyadic question of how individuals regard their relationships with other people. For this reason, in this study Chao's measure of the

"people*"* dimension of socialization is referred to as a measure of "relationships" with other people during the socialization process.

Occupational Identity. Occupational identity refers to a physician's identification with their profession (Myer, Allen, & Smith, 1993). This study adopts the term occupational identity to assess physicians' identification with their particular line of work (Myer et al., 1993). A physician who strongly identifies with their profession has a strong desire to remain a physician. These individuals are more likely to keep up with professional development activities related to their professional role, such as subscribing to journals or attending conferences or workshops. When involvement in the profession is perceived as a satisfying experience, physicians develop a stronger identification with their profession (Myer et al., 1993).

Inter-Professional Communication

Communication that occurs between HCPs is defined as inter-professional communication (Real & Buckner, 2014). That is, one HCP communicates with another HCP from a different profession. For the purposes of this study, inter-professional communication occurs when physicians collaborate with other non-physician HCPs such as nurses, nurse practitioners, technicians, or therapists, etc. to care for a shared patient. Physicians form perceptions about inter-professional communication in terms of mutual support and communication, which have implications for future inter-professional interactions (American Institutes for Research, 2010). In this study, inter-professional communication consists of mutual support, communication, and organizational identity.

Mutual Support. Effective collaboration between physicians and other HCPs requires trust, knowledge, mutual respect, cooperation, coordination, and shared

responsibility. These qualities are established by developing an integrated healthcare delivery system that promotes contributions from and recognizes the efforts of all involved HCPs (Sherrod, Collins-McNeil, & Sharpe, 2013). Mutual support is achieved when physicians are able to anticipate the needs of other HCPs, and vice versa (American Institutes for Research, 2010).

Communication. The clear and accurate exchange of information between physicians and other HCPs is required for successful inter-professional communication (American Institutes for Research, 2010). To achieve a successful flow of information, physicians and other HCPs need to evaluate collaborative processes on a regular basis and include results as part of a quality improvement program. Inclusion is key in this process, as all HCPs need to be informed and have the opportunity to offer input and suggestions related to patient care (Sherrod et al., 2013).

Inter-professional communication occurs on a daily basis whether it is during rounds, or unplanned hallway encounters (Conn et al., 2012). However, such interactions are often informal, and not mandated or formally overseen by the organization. In many instances, healthcare institutions are implementing required inter-professional communication in the form of interdisciplinary healthcare teams. Interdisciplinary teams are groups of HCPs from various disciplines who work interdependently in the same setting, and are motivated to communicate with one another to provide patient care (Real & Pool, 2011; Real & Buckner, 2014). For physicians, the teams they are a part of are likely unique to specific organizations, locations, and/or shifts. Given the growing number of healthcare institutions adopting interdisciplinary teams, physicians' abilities to

engage in successful inter-professional communication is important now, more than ever before.

Organizational Identity. Organizational identity refers to a physician's identification with the organization where they work (Myer & Allen, 1991). A physician who strongly identifies with their organization experiences an emotional attachment to or involvement in the organization, and continues employment with the organization because they want to (Myer &Allen, 1991). The continued desire to remain employed with the organization develops as a result of positive work experiences that create and sustain feelings of comfort and personal competence (Myer & Allen, 1991). Organizational identity is relevant in this study because the organization is the structure where inter-professional communication occurs.

Predicted Outcome Value Theory

This study is grounded in Sunnafrank's (1986) predicted outcome value theory (POV). This theory builds upon uncertainty reduction theory (Berger & Calabrese, 1975) to reflect the important relationship between the uncertainty about another individual, and perceptions of relational rewards and costs to be obtained in connection with that individual. Although Sunnafrank's original work examined how individuals form impressions of others during initial interactions, in this study POV provides a lens for examining how socialization acts as a process of impression formation for physicians. Specifically, physicians' POV for interactions with other HCPs is formed during the occupational socialization process.

POV states that existing impressions either encourage or discourage further relational development. For physicians in dynamic health organizations, rewards and

costs of inter-professional communication may be assessed based on POV constructs. Before further explicating how POV may shape physicians' organizational relationships, it is important to describe the tenets of Sunnafrank's original work on POV.

Theoretical Foundation. POV suggests that upon meeting, the primary goal of strangers is to maximize relational outcomes. Individuals are thereby required to acquire information about others and thus reduce uncertainty during initial interactions, in an effort to enable them to predict the potential value of future outcomes. To understand the role of POV in the present study, it is important to identify the underlying assumptions of the theory. Subsequent chapters will further apply the theory to the present study, beyond the foundational concepts presented here.

POV is grounded in the assumptions that individuals desire to maximize the outcomes of their interactions with others, and are more likely to form relationships with others who enable them to do just that. Given that such assumptions reflect the individual, POV proposes four characteristics of initial interactions. First, individuals are more attracted to partners and relationships when greater predicted outcome values are expected in the relational future. Second, positive predicted outcome values produce more attempts to extend initial interactions and establish future contact. Third, negative predicted outcome values result in attempts to terminate the conversation as well as future contact with that individual. Finally, individuals will attempt to guide conversations toward topics expected to result in the most positive predicted outcomes. During initial interactions then, individuals use their perceptions of others to guide their decisions about whether to avoid, restrict, or seek further relational content. When positive outcome values are predicted, individuals exhibit an increase in verbal

communication, nonverbal expressiveness, liking, information seeking behaviors, and intimacy level of communicative content with their interaction partner (Sunnafrank, 1986).

POV in Professional Socialization. This study argues that physicians' beliefs about the necessity for supportive relationships with other HCPs in patient care are formed in part, during the professional socialization process. For the purposes of this study, POV is operationalized as the vocational socialization of physicians into their profession. Interactions with supervising physicians during the professional socialization process impact the formation of professional identities. These identities in turn, have implications for physicians, especially when they are communicating with other HCPs.

The mechanisms through which physicians create POV impressions of non-physician HCPs is the focus of this study. Specifically, this study argues that physicians partially form impressions about the value of inter-professional communication during their vocational socialization process, and prior to any specific interaction with non-physician HCPs. Uncertainty about the role of *a physician*, or about other HCPs, in patient care is taught during medical education, and reinforced by attending physicians during the medical residency. The value assigned to an actual HCP inter-professional interaction is based more upon messages received during medical education about the value of other HCPs in patient care, than on messages gained during a specific initial HCP interaction. When physicians are required to communicate inter-professionally due to a team-based organizational structure, they enter such interactions with pre-established perceptions about such communication. Although POV may play a role in reducing uncertainty about the relative value of a specific interaction, this study explores the extent

to which POV is the basis of much deeper assumptions about physicians' views on the value of collaboration with non-physicians to maximize patient outcomes. Based on such perceptions, during initial HCP interactions, physicians communicate based on existing assumptions about non-physician HCPs, perhaps overlooking individual characteristics of the other person or the potential value of supportive HCP relationships. It is in this way that the present study expands the scope of POV beyond initial interactions to help understand the mechanisms through which physicians' impressions are formed about the predicted outcomes and relative value of inter-professional communication.

Sunnafrank and Ramirez (2004) have expressed the possibility of an extension of POV beyond initial interactions, suggesting that the predicted value of future relationships could indeed influence future interactions and the quality of such relationships. They suggested that future research concentrate on the relationship between POV and other initial assessments in producing long term effects. Conversely, this study seeks to explore the origins of POV in previous socialization processes, and posits that the centrality of impression formation among physicians during medical education is central to physicians' POVs during ongoing inter-professional communication throughout their careers. In this way, professional identity formation during the vocational socialization process creates lasting perceptions of the value of inter-professional communication.

Taken into the healthcare context, it makes sense that medical students' POV judgments about inter-professional communication are likely impacted by perceptions of supervising physicians during the professional socialization process. POV research in the organizational context supports this argument, suggesting that newcomers do in fact form

lasting judgments early in the socialization process, so organizations need to focus on the early stages of socialization to ensure positive POV judgments are developed (Madlock & Horan, 2009). Similar results were found in the instructional context, where students' early perceptions of instructors' use of relational messages, components of confirmation and conversational skills, and referent and expert power predicted over half of the variance in students' POV judgments (Horan, Houser, Goodboy, & Frymier, 2011). The combined results of these studies suggests that physicians' perceptions of inter-professional communication are likely determined by whether they believe that forming relationships with other HCPs would have direct positive or negative implications for them and their patients, based on information received during the professional socialization process.

In the physician-patient interaction, a patient's desire for information *prior* to the actual visit was more predictive of uncertainty levels during the visit that the desire for information in general (Sheer & Cline, 1995). This finding introduces the importance of a temporal dimension of information processing. It is possible that physicians also experience this temporal dimension of information processing. If this is the case, medical students may desire information about their profession prior to clinical interactions. In turn, the information presented to them during the professional socialization process may be significant in predicting perceptions of future inter-professional communication.

CHAPTER II

Review of Literature

The previous chapter provided an overview of the rationale for the current study. This chapter reviews relevant literature related to physicians, physician education, professional socialization, professional identity, and inter-professional healthcare communication. Following the review of literature, a rationale will propose the hypotheses and research questions to be examined in this study.

Physicians in Modern Healthcare

Modern healthcare is no longer concerned with the individual care that each physician provides to a patient, but is rather focused on the combination of such efforts from multiple physicians and HCPs to reflect the overall quality of care a patient receives (Northouse & Northouse, 1998). Communication is central to the study of physicians, as messages and relationships help form the social environment of healthcare (Villagran & Weathers, 2014). The communicative environment surrounding HCPs affects the relationships between physicians and other providers, which in turn elicits direct implications for the patient and the quality of care received from physicians (Northouse & Northouse, 1998).

Medical Hierarchy. The words used to explain roles are powerful, as they set certain expectations and ultimately shape behaviors (Hartzband & Groopman, 2011). Much has been written about use of the term *provider* as a generic way to describe all healthcare professionals. Use of this term is somewhat controversial especially among physicians, who are used to the extraordinary power and prestige that is typically granted by their title (du Pre, 2010). Much has been written about use of the term *provider* as a

generic way to describe all healthcare professionals. In a blog post on the topic, Ofri (2011b) recalled,

> I can't quite remember when the term 'provider' slipped into the hospital lexicon. It was perhaps 10 years ago, when our hospital started hiring physician assistants and nurse practitioners to share the clinical load. In contrast to the regular staff nurses, who cared for the patients in conjunction with the doctors, physician assistants and nurse practitioners would see patients independently, the way the rest of the doctors did. So there needed to be a term that would include all three groups – physician assistants, nurse practitioners and doctors — who could have primary responsibility for patients.

Harzband and Groopman (2011) denounced describing physicians as providers because of the term's generic and impersonal connotation, that demeans physicians, strips them of their level of professionalism, and neglects the overall essence of medicine. Ofri (2011b) felt being called a provider, "makes [physicians] feel like a vending machine, pushing out hermetically sealed bags of 'healthcare' after the 'consumer's' dollar bill is slurped eerily in." However, Ofri (2011b) also conceded the term provider can actually minimize hierarchy among physicians, nurses, and other healthcare professionals by reducing perceptual status judgments on the part of patients regarding the quality of care by different members of their healthcare team. Specifically, Ofri (2011b) contends that "Physician assistants, nurse practitioners, and doctors have more similarities than differences in their day-to-day interactions with patients, even as they come from unique backgrounds and bring different strengths to the table."

At a time when collaboration among HCPs is a growing trend (Davis & Robinson, 2010), old-fashioned and individualistic terms like doctor and nurse, must be replaced with terminology that fits this modern approach to healthcare (Hartzband & Groopman, 2011). In fact, the traditional medical hierarchy that many physicians believe to provide

leadership, actually serves as a means by which physicians at the top of the hierarchy "stomp on the underlings" below them (Ofri, 2011b). While there is a variety of language to describe each provider's individual role in the hierarchy of the healthcare process, this hierarchy creates a barrier to successful inter-professional communication between physicians and other HCPs (Real & Buckner, 2014). A lack of successful communication between physicians and other providers can lead to medical errors and additional adverse effects to patients, as well as impair the overall teamwork processes (Rogers et al., 2013).

Holistic Model of Patient Care. The shift to physician collaboration in modern healthcare partially comes in response to patients' discontent with specialists treating certain ailments, and failing to see them as whole people (du Pre, 2010). This new type of holistic approach to patient care requires input from and the breakdown of information to physicians, in addition to a diverse group of HCPs (Demiris et al., 2008). Thus, minimizing the hierarchy maintained through formal titles (Ofri, 2011b) sets the stage for a more collaborative environment of communication between physicians and their colleagues (Northouse & Northouse, 1998). HCPs' expectations about communicating with physicians are changing (Rogers et al., 2013). Thus, physicians must be prepared to effectively communicate with other providers on a more collaborative level than ever before.

Physician Collaboration. Providing 100% of care to a single patient is physically impossible in today's world (Real & Buckner, 2014). Time and financial constraints , the growing complexity of patient cases (Davis & Robinson, 2010), and role stress (du Pre, 2010; Villagran & Weathers, 2014) that physicians deal with every day on the job contribute to the need for collaboration with other HCPs. Currently, physicians are seeing

an increased number of patients as the population ages and their health declines (Davis & Robinson, 2010). This influx of patients also comes at a time when healthcare costs are exceeding inflation, and there is high demand for a reduction in the overall costs of healthcare (Davis & Robinson, 2010; Hartzband & Groopman, 2011). Additionally, the current shortage of physicians impedes the medical community's ability to provide care to an aging population that is living with chronic conditions and experiencing longer life spans (Mitka, 2007).

Consolidating physicians is a growing trend in healthcare institutions because it is a way to combine scarce human and financial resources (Davis & Robinson, 2010; Mickan & Rodger, 2005) that ultimately allows institutions to reduce operating costs and be more competitive (du Pre, 2010). This consolidation emphasizes the importance of physicians engaging in successful inter-professional communication interactions with other HCPs to effectively perform their duties (Kreps & Thornton, 1992). In fact, efficiency in patient care, which was once conceptualized on an individual caregiver level, is now evolving into more of a collaborative effort, wherein residents are exhibiting stronger peer and group orientations, and working collaboratively to manage workloads (Szymczak & Bosk, 2012).

In addition to the logistical side of patient care, physicians are human, and are not exempt from the common emotional responses that most humans face during difficult times. Because physicians' work constantly puts them in contact with patients who are trying to overcome serious emotional or physical illnesses (du Pre, 2010), they are often faced with stress and conflict on a daily basis, themes that can lead to a variety of challenging communication interactions (Villagran & Weathers, 2014). This is especially

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true for emergency room physicians who experience stress, anxiety, depression, and sometimes even PTSD as a result of the demanding environment in which they work (Villagran & Weathers, 2014). With the support and collaboration of a variety of HCPs, the emotional burden as well as the workload that comes with caring for a single patient is distributed among those providers. Sharing the workload is important because if physicians become physically and mentally exhausted, they will have less energy to focus on patient needs (du Pre, 2010).

Physician Education

  Medical School. Medical school is a four year education program. Students who are accepted into medical education programs are highly motivated individuals, who are focused on achieving personal success (Stalmeijer, Gijselaers, Wolfhagen, Harendza, & Scherpbier, 2007). Students spend their first two years of medical school in lecture halls and laboratories (Groopman, 2007). This is where they concentrate on anatomy, chemistry, physiology, and pathology. It is during this time that students are required to absorb a great deal of scientific information (Korsch & Harding, 1997). In the process, students acquire new knowledge and a new set of technical skills to enable them to care for patients. For example, students learn the relevant formulas for cardiac output and gas exchange in the lungs, and learn the actions of medications on the heart muscle (Groopman, 2007). Also included in this knowledge is a new vocabulary that requires students to learn how to communicate in a new way. According to Hartzband and Groopman (2011), a first year medical student is likely to spend hours upon hours learning this new vocabulary, and ultimately an entirely new language. Students initially discover this new vocabulary as they attend classes, choose project topics, and conduct

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research (Duncan & Holtslander, 2012). They then confirm this vocabulary by checking it against their instructors and their textbooks (Duncan & Holtslander, 2012). It is during these first two years of medical school, that many students perceive the overload of scientific information to have no relevance to the actual practice of medicine, and begin to question why they chose the profession in the first place (Korsch & Harding, 1997).

During the third and fourth years of medical school, students begin to learn at the bedside of patients (Groopman, 2007; Korsch & Harding, 1997). Students are taught how to organize patients' history and instructed how to examine patients (Groopman, 2007). Attending physicians walk them through a calm and deliberate analysis of clinical information and provide instruction as to how to treat the condition (Groopman, 2007). Students are also evaluated on their ability to correctly diagnose patients in paper cases, or written data. Attending physicians provide additional information and allow students to offer potential causes of the condition. A laundry list is compiled before the attending physician selects the correct diagnosis and discusses the measures that should be used to treat the condition (Groopman, 2007). Because medical students are highly motivated to achieve personal success, they are often very control-oriented and fear that their performance on a team may fall short of what they could achieve as an individual (Stalmeijer et al., 2007). Medical education then adds a system of rewards based on individual grades, which further creates a competitive versus collaborative environment among students. Even during this early stage in the education process, medical students are socialized to be the "best" even among other physicians (Stalmeijer et al., 2007).

As students are interacting with patients for the first time, sickness and death surrounds them, which can leave them feeling overwhelmed and vulnerable (Korsch &

Harding, 1997). One physician describes the long awaited moment of interacting with a patient as "the end of play-acting as a doctor, [and] the start of being a real one" (Groopman, 2007, p. 27). While the patients are now real, so is the sickness. Some students give in to those feelings of vulnerability and succumb to a phenomenon known as "medical student's disease," where they experience the same symptoms as their patients (Korsch & Harding, 1997). Others report forgetting everything they learned, and being unable to listen to a patient's heart and know what to do with that information (Groopman, 2007). The demands of medical school keep students so busy and so cut off from the outside world of relationships that some refer to those extra five, six, or seven years of training as a delayed adolescence (Korsch & Harding, 1997). At the conclusion of the four year education program, medical students graduate and enter programs of residency as they are still not yet ready to practice medicine in the absence of supervision (du Pre, 2010).

    Residency. Residency is differentiated from the hands-on training students receive in the last two years of medical school, in that the training becomes more intense (Korsch & Harding, 1997). Because residents already graduated medical school and are now junior physicians, they are required to care for an increased number of patients, carry a greater amount of responsibility related to clinical care, and are under immense pressure to perform (Korsch & Harding, 1997). Anything less than perfect performance means that residents are not living up to expectations (Korsch & Harding, 1997). During residency, the residents rotate through different departments under the guidance of supervising physicians, and perform additional tasks that are characteristic of the profession. For instance, residents are required to be on call (Groopman, 2007; Wallenburg et al., 2013).

Groopman (2007) recalls his experience of being on call every third night where he was all alone and responsible for an entire floor of patients along with any new admissions that came in overnight. Residents are also required to attend morning report sessions (Groopman, 2007; Szymczak & Bosk, 2012) where they meet with other residents and supervising physicians, and discuss what happened overnight (Groopman, 2007). As residents gain knowledge, skills, and practical experience they gradually take on increasing responsibilities and carry out more procedures independently (Wallenburg et al., 2013).

This is a difficult time for many residents as they must find a balance between what is expected of them and live up to those expectations, all while providing care to patients (Wallenburg et al., 2013). When junior physicians face uncertainty they are taught to reject it. Instead, they often become overconfident and convince themselves that they are right because they are physicians (Groopman, 2007). When physicians implement this type of defense against uncertainty, they are deflecting to the conformity and orthodoxy learned in medical school. Medical students are taught a specific way of doing something, and are conditioned to adopt one school of thought over the other (Groopman, 2007). For example, physicians typically prescribe the same two dozen drugs to patients, the majority of which were adopted during medical training (Groopman, 2007). By sticking with procedures and drugs that are familiar to them, physicians are able to make matters seem clearer, more understandable, and more certain than they actually are (Groopman, 2007).

Just like physicians are taught that they must overcome uncertainty, traditional medical education teaches them that there is no place for emotions in medicine. In fact,

the term "conspiracy of silence" refers to medical educators' reluctance to discuss

feelings in the learning environment (Korsch & Harding, 1997). Physicians are trained

much like soldiers (Korsch & Harding, 1997) in that they are taught to suppress emotions

and block natural responses to what they see and what they must do (Groopman, 2007).

The goal of medical education is to professionalize physicians so that they learn to

function under stress and are able to focus on the task at hand, make the right diagnosis,

and perform the appropriate procedures in a high stress environment (Korsch & Harding,

1997). However, overcoming such emotions is not an easy task, especially since as

Groopman (2007) points out, physicians learn from their mistakes that are made on living

people.

 Although it makes sense that physicians must learn to function in spite of strong

emotions, teaching physicians to suppress their emotions poses a major drawback. Dr.

Francis Weld Peabody of Harvard Medical School explains,

> "To become immune to feeling is to diminish the full role of the physician as a
> healer and relegate him to a single dimension of his job, that of a tactician. We
> face a paradox: feeling prevents us from being blind to our patient's soul, but
> risks blinding us to what is wrong with him" (Groopman, 2007, p. 54).

When physicians lose sight of themselves as human beings and focus solely on the

technical end of medical care, they also fail to see their patients as human beings and fail

to understand how their patients feel (Korsch & Harding, 1997). Attending physicians

model such behavior by treating their residents in ways that are not very human, and

praising them when they conform to this mindset (Korsch & Harding, 1997). Groopman

(2007) recounts the story of a resident who realized that he was a "good" doctor after

receiving praise from his mentor for letting go of his emotions and in turn performing

more efficiently.

In addition to the encouragement residents receive to suppress their emotions, they also face losing their human qualities as a result of the high demand of the job. Medical students are so busy that they rarely have time to participate in normal social interactions that allow them to assume their adult role in society (Korsch & Harding, 1997). Additionally, because residents work in hospital wards, they rarely experience such social interactions on the job, and are typically not able to get to know their patients as real people like primary care physicians (Korsch & Harding, 1997). Because students are not encouraged to properly deal with their emotions during education, those emotional problems carry over to and intensify in subsequent careers (Korsch & Harding, 1997). Kreps and Thornton (1992) explain that continued heavy workloads, high stress, and constant contact with human suffering can cause physicians to be callous to the feelings of others. These unresolved emotional issues and lack of normal social interactions likely have implications for physicians when they must communication inter-professionally with other providers.

Communication in Physician Education

Physicians spend a vast majority of their time communicating with patients (Epstein & Street, 2007). Consequently, the importance of teaching provider-patient communication skills is widely accepted in medical schools internationally (Bennett & Lyons, 2011; Norgaard, et al., 2012). However, teaching medical students about the equal importance of inter-professional communication skills is less common (Conn et al., 2012). This is cause for concern, because ineffective communication between physicians and other providers has direct implications for patients, such as the potential for medical errors, delays in patient care (Norgaard et al., 2012), a reduction in the quality of patient

care, and overall dissatisfaction among HCPs (Mooney, 2007). It is likely that this problem persists because physicians' feedback to medical students often concentrates solely on the medical content of the interaction, disregarding the inherent link to communication (van Weel-Baumgarten, Bolhuis, Rosenbaum, & Silverman, 2013). Perhaps, as Cary and Kurtz (2013) suggest, these physicians perceive communication as a "soft skill" that is less important than other aspects of the medical education agenda. Unfortunately, physicians are not born with effective communication skills, so they have to first be introduced and then practiced in order to be mastered (Kreps & Thornton, 1992).

As there is a push for increased collaboration between physicians and other HCPs, medical education curriculums are increasingly including communication skills for professional health communication (Gordon, 2003), with favorable results. Medical students in Bennett and Lyons' (2011) study indicated that they felt more confident in their communication skills following training exercises, and 97% of those students viewed communication skills as highly important overall. Ross (2012) suggests that training students in communication skills is most effective when educators utilize a combination of teaching strategies which engage students in activity, and include as much realism as possible. Educators who are able to link communication to medical content play an important role in motivating students to learn how to communicate well (van Weel-Baumgarten et al., 2013). The TeamSTEPPS Primary Care program is one approach that medical education programs can adopt to train future physicians communication skills that can be applied in inter-professional settings.

TeamSTEPPS Communication Skills Training

TeamSTEPPS stands for Team Strategies & Tools to Enhance Performance & Patient Safety, and was developed by the Agency for Healthcare Research and Quality (AHRQ) which is a division of the U.S. Department of Health and Human Services. The TeamSTEPPS program promotes the development of healthcare teams to "plan, problem solve, communicate, collaborate, and coordinate to co-create and carry out care to their patients over time" (Agency for Healthcare Research and Quality, 2013). The overall aim of this vision is to reduce the number of medical errors. Specifically, the program provides reasoning and justification for learning communication skills, and suggests that leadership, situation monitoring, mutual support, and communication between team members are key factors in a successful healthcare team. This study adopts mutual support and communication as two factors related to inter-professional communication.

There are three phases included in the implementation of TeamSTEPPS. In the first phase, a team of HCPs is developed that represents various professions. TeamSTEPPS training is most effective if it is delivered by a multidisciplinary team made up of physicians, members of the nursing staff, and support staff. That team then conducts a needs assessment to uncover deficiencies in the current system, and a plan is developed to address such issues. Finally, a list of goals is compiled that will reduce or eliminate potential risks to patient care (Agency for Healthcare Research and Quality, 2013). If this phase were to be implemented in physician education programs, educators would need to decide how to recreate this type of team setting. Perhaps the training team would consist of educators themselves. Perhaps on a larger scale, physician and nursing

education programs could team up to implement such training for future physicians and nurses.

In the second phase, the TeamSTEPPS framework is implemented. The implementation is flexible to accommodate different organizations. Teams have the option to phase-in the initiative by initially targeting specific units or departments then expanding to eventually incorporate the entire organization. Teams may also elect to select specific tools that will be introduced at certain intervals, in order to familiarize providers with the training methods. In order to gain commitment to the program, a phase-in approach is suggested. The curriculum contains three sets of course material. "Train the Trainer" is a two day course that prepares members of the team to train and coach others. "TeamSTEPPS Fundamentals" is a 4 - 6 hour session that includes interactive workshops that relate to physicians and other providers who provide direct care to patients. "TeamSTEPPS Essentials" is a 1 - 2 hour condensed version of the fundamentals course. This version is geared towards nonclinical support staff. It is suggested that if different sets of staff are trained independently, that a combination of these three programs be utilized (Agency for Healthcare Research and Quality, 2013). For the purposes of implementing such training in physician education programs, it would also be beneficial to utilize a combination of materials to familiarize future physicians with the holistic view of healthcare.

The third phase of the TeamSTEPPS framework is to maintain and improve teamwork performance. Opportunities should be created for providers to utilize the tools and enact the strategies taught during this training. Team leaders, or supervising

physicians for the purposes of physician education, should emphasize the skills learned in training on a daily basis, and provide regular feedback and coaching to junior physicians.

Communication Training in Residency. Medical schools are not only expected to teach students the knowledge and skills of the profession, but are also expected to develop models of learning that enable attitudinal development (Howe, 2002). For example, students must be oriented to important attributes of the profession, such that their values and skills align with the profession's overall goals (Mann, Ruedy, Millar, & Andreou, 2005). This aspect of student learning is achieved through firsthand experiences (Howe, 2002), which occur during programs of residency. Residency requirements in turn, allow medical education programs to demonstrate that they are teaching and assessing these skills in their students (Bylund & Koenig, 2014). In past years, we have seen a shift towards more formalized and structured training programs (Wallenburg, Bont, Heineman, Scheele, & Meurs, 2013). This shift likely comes in response to heightened expectations of residents, who are now expected to care for the same amount of patients in a shorter amount of time (Szymczak & Bosk, 2012).

Communication Training for Established Physicians. Although established physicians are exempt from having learned such skills during their formal education, there is a demonstrated value in enrolling practicing providers in communication skills training seminars. Following such training in Norgaard et al.'s (2012) study, providers expressed higher self-efficacy, while patients were significantly more satisfied with information, continuity, and the overall care they received. Cary and Kurtz (2013) suggest that for best results with established providers, educators should integrate the teaching of communication skills with clinical reasoning, so the interdependence of the

two becomes apparent, thereby driving skill development and deeper learning of content, resulting in a well-rounded provider.

Professional Socialization

Medical education programs provide their students with the necessary knowledge and skills to enter the healthcare field, but students also acquire a new professional identity as they learn what it means to be a physician (Wagner et al., 2007; Simpson, 1967). Some have suggested that medical students are stripped of their previous identities during the education process (du Pre, 2010). Although students may enter medical education programs with certain perceptions of the profession, those perceptions are likely altered by the influences of role models during the professional socialization process (Korsch & Harding, 1997; Mann et al., 2005; Rogers et al., 2013).

Informal Training. Much of the knowledge that medical students and residents learn about their professional role and communicating within that role, is acquired informally outside of the classroom (Barry, Cyran, & Anderson, 2000; Kuziemsky et al., 2009; Sibbald, Wathen, Kothari, & Day, 2013). The term "hidden curriculum" is used to describe the learning that occurs outside of the formal medical curriculum (Cribb & Bignold, 1999), and it is this implicit and unintended learning process that may explain the gap between what is formally taught in medical training, and actual outcomes in professional settings (Howe, 2002). That is, in the absence of formal training, residents develop their own clinical preferences and routines from observing supervising physicians (Rogers et al., 2013; Wallenbuur et al., 2013). It is for this reason that researchers suggest that faculty members in medicine develop strong collegial

relationships so that they can model collaborative relationships to their students (Northouse & Northouse, 1998).

Several studies have found support for this argument. In Barry et al.'s (2000) study, a sample of medical students, house officers, and physicians indicated that they learned the most information about unofficial rules and regulations of the profession during informal discussions. In Kuziemsky et al.'s (2009) study, two healthcare teams indicated that even though their teams held regular meetings, they often engaged in informal discussions with each other to exchange organizational information and issues related to the team. Similar results were reported in Sibbald et al.'s (2013) study by team members that indicated mentorship as the main way information was disseminated, citing senior residents as the main source of information for junior staff members. Additionally, medical students in van Weel-Baumgarten et al.'s (2013) study indicated that they valued feedback from HCPs who were not only familiar with the relevant specialty, but also with the setting. This finding implies that professional rules, norms, and expectations are unique to each healthcare setting.

Evaluations of Informal Training. Because medical students are left to learn a majority of the information about their professional role informally, students and physicians are dissatisfied with the lack of formal training about how to properly communicate with other HCPs in the healthcare arena (Barry et al., 2000). Gordon (2003) attests to the problem of medical students relying solely on supervising physicians as role models to learn inter-professional communication skills, pointing out that some physicians may have "dubious ethical values, poor communication skills, and haphazard approaches to self and patient care" (p. 343). Rogers et al. (2013) add that physicians are

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likely also untrained and may be employing behaviors that are outdated or no longer appropriate in modern healthcare. These claims are exemplified in Szymcak and Bosk's (2012) study where residents were critical of interns who spent too much time with patients. This observation is ironic given that communicating with patients is central to providing optimal healthcare (Northouse & Northouse, 1998). Perhaps such issues will be resolved by enhanced training for future physicians, which seems to be on the horizon with the recent development of the PCMH and subsequent communication skills training programs such as TeamSTEPPS,

      Implications of Informal Training. Physicians acquire a majority of their inter-professional communication skills through informal interpretations of the communicative behaviors of supervising physicians. In turn, the educational settings in which physicians are trained and socialized have implications throughout their careers, in particular when they must communicate inter-professionally with other HCPs. When physicians collaborate with other HCPs to determine the best method of treatment for a patient, their perspective is directly influenced by the culture of the health-related discipline in which they were trained (Wright, Sparks & O'Hair, 2013). This variation often leads to differing perceptions about the patient and his/her situation (Wright et al., 2013). Working collaboratively is becoming more of the norm and less of the exception for physicians (Kuziemensky et al., 2009). Therefore, it is important to understand how physicians' professional identities affect their perceptions of inter-professional communication. Given that the professional socialization process is greatly influenced by others (Price, 2009), physicians' perceptions about inter-professional communication with other HCPs

are likely the product of their internalizations about their assessments of supervising physicians during socialization.

Inter-Professional Communication

Communication is central to inter-professional interactions as collaboration and teamwork among providers are essential components of quality care for patients (Demiris et al., 2008). Since the patient's treatment process is impacted by interactions among physicians and other providers (Villagran & Baldwin, 2013) it is important for physicians to continually assess their own communication behaviors and explore ways to enhance the flow of information (Demiris et al., 2008). Information sharing is a complex process (Sibbald et al., 2013), which is why physicians engaging in inter-professional communication must remain dynamic, and should be open to modifying individual duties based on patient needs, organizational policy, and the individual expertise of other HCPs (Demiris et al., 2008).

Effective inter-professional communication requires a strong framework that supports information exchange, knowledge sharing, and the documentation of interactions and decisions (Demiris et al., 2008). A sample of physicians, nurses, administrators, and allied health professionals in Mickan & Rodger's (2005) study suggests that in order for inter-professional communication to be effective, goals need to be set collaboratively, and be operationalized in a way that can be easily measured. Additionally, collaborating HCPs need to agree on the main type of communication channel to be utilized, as well as the frequency with which the channel should be monitored, especially if it is mediated and not face-to-face (Kuziemsky et al., 2009). Establishing these guidelines is important, because many physicians work with a variety

of providers at one time, as they often serve on multiple teams (Real & Buckner, 2014).

Thus, minimizing confusion is of the utmost importance.

Inter-professional communication requires a shared power structure that has traditionally been dominated by physicians (Northouse & Northouse, 1998; Villagran & Weathers, 2014). Because practicing physicians generally do not receive communication skills training (Bylund & Koenig, 2014), informal training during the socialization process is often the only exposure to inter-professional communication skills that physicians receive. Thus, in an effort to enhance inter-professional healthcare communication, we must examine how physicians' professional identities formed during the socialization process impact their perceptions of inter-professional communication.

With modern approaches to healthcare favoring collaborative models such as the PCMH, inter-professional communication is here to stay. Davis and Robinson (2010) suggest that physicians embrace this modern approach to healthcare, wherein strategic partnerships and joint ventures result in a high degree of collaboration and communication. Physicians who adopt this approach and exhibit common goals and incentives will be better positioned for the future of healthcare than those who do not (Davis & Robinson, 2010).

Rationale for Study

Modern healthcare calls for increased collaboration among physicians and other HCPs (Davis & Robinson, 2010; Mickan & Rodger, 2005; Miles, 2011). Healthcare institutions are responding to this call by adopting holistic models of healthcare that require a high degree of collaboration (Agency for Healthcare Research and Quality,

2013). In turn, to provide the best quality of care to patients, physicians must effectively communicate inter-professionally with other HCPs (Davis & Robinson, 2010).

Thus, it is important to examine physicians' perceptions of inter-professional communication. Given the trend toward collaboration, understanding how physicians' professional socialization and professional identity formation impacts their perceptions of inter-professional communication fills an important gap in medical education curricula.

According to POV, the impressions we form of others during initial interactions either encourage or discourage relational development (Sunnafrank, 1986). Professional identities are influenced by role models in the professional socialization process (Mann et al., 2005). In turn, it makes sense that physicians' perceptions of inter-professional communication are likely impacted by their conceptual understanding of the physician's traditionally dominant role in healthcare, which is formed during the socialization process. Hence,

H_1: Physicians' professional socialization about their profession's history and language will be significantly negatively related to perceptions of mutual support and communication.

It is also apparent that physicians' beliefs about inter-professional communication are related to the information they receive about the value of professional relationships in the workplace. Hence,

H_2: Physicians' socialization about professional relationships will be significantly positively related to perceptions of mutual support and communication.

Because this study posits that identity formation occurs during the professional socialization process, the following research questions are proposed:

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RQ$_1$: How do physicians' perceptions of professional goals and values impact

their perceptions of organizational identity and occupational identity?

RQ$_2$: Is there a relationship between organizational identity and occupational

identity among physicians?

Finally, in an effort to begin to understand the combined predictive power of the

dimensions of professional socialization on physicians' perceptions of inter-professional

communication, the final research question is proposed:

RQ$_3$: Which dimensions of physicians' socialization process account for

variability in subsequent perceptions of mutual support and communication?

CHAPTER III

Method

The previous chapter proposed two hypotheses and three research questions. The purpose of this chapter is to describe the methods and procedures used to test these hypotheses and research questions. The chapter is divided into four sections. In the first section, participants are defined, and characteristics about them are presented. In the second section, procedures relating to the distribution of the questionnaire are described. The third section focuses on how the variables were measured. Finally, the fourth section describes how the data was analyzed.

Participants

Participants in this study were 29 (12 males, 14 females, 3 unreported) physicians, with a broad range of professional and educational experiences. The average age of participants was 38.92 years ($SD = 9.75$), with a range of ages from 26 - 66 years, and participants had an average of 9.14 years of professional experience ($SD = 6.01$). About half of the sample was White ($n = 16$). Other participants listed their ethnicity as African-American ($n = 1$), Asian ($n = 7$), Indian ($n = 1$), and Puerto Rican ($n = 1$). Three participants did not report their ethnicity. Table 1 summarizes the basic demographic characteristics for participants.

The physicians in this study reported their professional credentials as Doctor of Medicine (MD; $n = 20$), Doctor of Osteopathy (DO; $n = 1$), Attending Physician ($n = 8$), and Medical Resident ($n = 4$). Twelve participants reported two professional affiliations (e.g., MD and Attending Physician). Nurses, pharmacists, and clinical personnel were excluded from the study. The majority of participants indicated they currently worked in

a hospital setting ($n = 23$), but a few participants also worked in public clinics ($n = 2$) or private medical practices ($n = 2$). One participant reported working a hospital and public clinic. Three participants did not report the nature of their organization. Table 2 summarizes physician-specific participant demographics.

Data Collection and Procedure

Participants were recruited in a multi-step process. First, a flyer containing information about the study and a link to the survey was shared with students at a large southwestern university who had existing relationships with physicians. Second, information about the study along with a link to the survey was sent to research offices at several local hospitals. Third, the same information was shared with medical residents at a large military medical residency program, where the co-principal investigator currently holds a research appointment.

Potential participants were invited to login to an online site to receive additional information about the study. Those who met the inclusion criteria and elected to complete the survey online were directed to the Informed Consent document. Participants could also email the principal investigator to receive a paper copy of the survey and a consent form, along with a self-addressed stamped envelope.

Regardless of whether the survey was completed online or in paper form, a signed consent form was completed as part of the research protocol. The consent form stated the significance of the study and the value of each participant's participation (see Appendix A), and included information about confidentiality and the voluntary nature of the project. Participants completed a total of 48 Likert-type and 6 demographic items.

Participants were given the option to include additional information about inter-professional communication in an open ended, qualitative item.

Online surveys were administered via the Qualtrics online survey delivery system. Qualtrics provided a secure server for data collection and storage. All participants received a $15 gift card as a participant incentive. Gift cards were mailed electronically to participants at email addresses provided separately from the survey data.

Instrumentation

The survey was comprised of eight scales representing the two primary variables in the study: physician professional socialization and inter-professional communication. The professional socialization variable contained five measures. The inter-professional communication variable contained three measures. Table 3 summarizes means, standard deviations, and Cronbach's alphas for each measure. The following section describes each measure.

Professional Socialization. Measures of socialization included Chao et al. (1994)'s Organizational Socialization Scale, and Myer et al.'s (1993) Affective Occupational Commitment Scale.

The Organizational Socialization Scale (see Appendix B) determines relationships between learning particular features of a job/organization and the process and outcomes of socialization. For the purposes of this study, the measure was used to create a baseline of participants' individual perceptions of their levels of socialization into the medical profession. This 34-item scale consists of six subscales designed to measure history, language, politics, people, organizational goals and values, and performance. Participants in this study completed adapted versions of four of these subscales including history,

language, goals and values, and the people (relationships) subscale. The politics and performance subscales were not included in the final questionnaire. The politics and performance subscales focused primarily on an individual's socialization into a specific organization, and specific responsibilities assigned to that organization. For example, the politics subscale included items such as, "I have learned how things really work on the inside of this organization." The performance subscale included items such as, "I have mastered the required tasks of my job." Because the present study focuses on an individual's socialization into their profession, it was decided that inclusion of these subscales was not necessary in the present study.

All items were measured on a seven point Likert-type scale that indicated participants' agreement or disagreement with various statements, where 1 = "strongly disagree" and 7 = "strongly agree." Items measuring history included items such as "I know my profession's long held traditions." Items measuring language asked questions such as, "I have mastered the specialized terminology and vocabulary of my profession." The goals and values subscale included items such as "The goals of my profession are also my goals." Finally, the relationships subscale included items such as "I believe that most of the members of my team like me." Reported reliability for the subscales was measured over a four year period, with the highest alphas reported in the second year. Cronbach's alpha for history was .85, language was .86, goals and values was .83, and people was 82. Two items were reverse scored in both the history and language subscales, one item was reverse scored in the goals and values subscale, and three items were reverse scored in the relationships subscale. The following items were reverse scored in the final questionnaire: 1, 2, 7, 8, 14, 23, 24, 26. Cronbach's alphas for these

subscales in the present study were α = .90 for history, α = .79 for language, α = .88 for goals and values, and α = .71 for relationships.

The Affective Occupational Commitment Scale (see Appendix C) measures participants' identification with their profession. For the purposes of this study, this scale was used to measure physicians' perceptions of their occupational identities (i.e. their role as a physician). Participants completed an adapted version of this 6-item scale which measured participants' agreement or disagreement with various statements on a seven point Likert-type scale , where 1 = "strongly disagree" and 7 = "strongly agree." Items asked questions such as, "Being a physician is important to my self-image." Reported reliability for this scale was .82. Three items in the scale were reverse scored. The following items were reverse scored in the final questionnaire: 19, 20, 21. Cronbach's alpha for this scale in the present study was α = .77.

Inter-professional Communication. Measures of inter-professional communication in the healthcare setting included the American Institutes for Research (2010) TeamSTEPPS Teamwork Perceptions Questionnaire, and Myer et al.'s (1993) Affective Organizational Commitment Scale.

The TeamSTEPPS Teamwork Perceptions Questionnaire (see Appendix D) serves as the national standard for team training in healthcare. For the purposes of this study, the measure provided a lens into participants' perceptions of inter-professional communication. This 35-item scale consists of five subscales designed to measure team structure, leadership, situation monitoring, mutual support, and communication. Participants in this study completed adapted versions of two of these subscales including mutual support and communication. The team structure, leadership, and situation

monitoring subscales were not included in the final questionnaire because they focused

primarily on the organizational structure within the team rather than on the actual

communication between individual HCPs. For example, the team structure subscale

included items such as, "Staff understand their roles and responsibilities." The leadership

subscale included items such as, "My supervisor takes time to meet with staff to develop

a plan for patient care." The situation monitoring subscale included items such as, "Staff

continuously scan the environment for important information." Because the present study

focuses on the inter-professional communication between individual providers, it was

decided that inclusion of the three subscales that focus on team structure was not

necessary in the present study.

All items were measured on a seven point Likert-type scale that indicated

participants' agreement or disagreement with various statements, where 1 = "strongly

disagree" and 7 = "strongly agree." The mutual support subscale included items like,

"Feedback between all team members is delivered in a way that promotes positive

interactions and future change." The communication subscale included items such as "All

members of my team relay relevant information in a timely manner." Reported reliability

tested high. Cronbach's alpha for mutual support was .90 and communication was .88.

No items in either subscale were reverse scored. Cronbach's alphas for these subscales in

the present study were $\alpha = .91$ for mutual support, and $\alpha = .81$ for communication.

The Affective Organizational Commitment Scale (see Appendix E) measures

participants' identification with their organization. For the purposes of this study this

scale was used to measure physicians' perceptions of their organizational identities (i.e.

their identification with the healthcare organization where they work). Participants

completed an adapted version of this 6-item scale. All items were measured on a seven

point Likert type scale that indicated participants' agreement or disagreement with

various statements, where 1 = "strongly disagree" and 7 = "strongly agree." Participants

responded to items such as, "This organization has a great deal of personal meaning for

me." Published reliability for the scale was moderate. Cronbach's alpha was .82. Three

items in the scale were reverse scored. The following items were reverse scored in the

final questionnaire: 46, 47, 48. Cronbach's alpha for this scale in the present study was α

= .90.

Data Analysis

All questionnaire data was entered and processed using SPSS. Once data entry

was complete, the spreadsheet was cleaned and variable names were determined. The

items that were reverse scored were then recoded so that a score of 1 = 7, 7 = 1, 2 = 6, 6 =

2, 3 = 5, 5 = 3, and 4 = 4. Reverse scoring items helps to ensure scale reliability (Keyton,

2011).

Scale reliability analyses were then conducted to ensure that all instruments were

reliable measures of the variables. All scales were reliable, and no scales required

deletion of individual items. The composite variables were then created by adding

together all scale items and dividing by the total number of items in each subscale. A

total of eight composite variables were created out of 48 individual items. Five variables

measuring physicians' socialization were retained: "ChaoHistory," "ChaoLanguage,"

"ChaoGoalsandValues," "ChaoRelationships," and "OccupationalAffect." Three

variables representing inter-professional communication were retained:

"TeamSteppsCommunication," "TeamSteppsMutualSupport," and

"OrganizationalAffect."

Descriptive statistics and scale reliabilities were computed for each of the

included scales. Descriptive statistics were calculated for the demographic items. Finally,

to address the proposed hypotheses and research questions, Pearson correlations were

used to examine the relationships between variables. Additionally, multiple regressions

were conducted to examine the association between professional socialization and inter-

professional communication. Specifically, history, language, goals and values, and

relationships were entered as independent variables while communication was entered as

the dependent variable in one model and mutual support was entered as the dependent

variable in the second model. Statistical significance was tested at or above 95% where p

≤ .05.

CHAPTER IV

Results

This chapter reviews the results from this investigation for the study's two hypotheses and three research questions. Findings for the socialization variables history, language, goals and values, relationships, and occupational identity are reported in relation to the inter-professional communication measurements of mutual support, communication, and organizational identity. Correlations that address the hypotheses are reported in Table 4. Correlations that address the research questions are reported in Table 5.

Hypothesis one predicted that physicians' socialization about their profession's history and language would be negatively correlated with communication and mutual support. This hypothesis was not supported. All correlations between the professional socialization and inter-professional communication variables are reported in Table 4. In this study, physicians' perceptions of socialization about the history of their profession was not significantly related to their perceptions of mutually supportive interactions ($r = .14$, $p = .49$) with other providers. Similarly, the data did not support a statistically significant relationship between participants' socialization regarding the history of their profession and perceptions of effective communication ($r = .19$, $p = .36$). Additionally, physicians' perceptions of socialization about the language of medicine are not related to their perceptions of the need for mutually supportive ($r = .23$, $p = .27$) interactions, or effective communication ($r = .19$, $p = .35$) with other HCPs.

Hypothesis two predicated that physicians' socialization about the value of organizational relationships would be positively related to perceptions of inter-

professional communication. This hypothesis was supported. Results indicate that the more participants were socialized to value professional relationships, the more they engaged in mutually supportive ($r = .61$, $p = .00$) interactions and effective communication ($r = .54$, $p = .00$) with other HCPs in the healthcare setting.

The first research question asked whether physicians' perceptions of socialization regarding the professional goals and values of physicians impacted their perceptions of their occupational identities (what it means to be a "physician"), and organizational identities (what it means to work as a physician in their organization). The data indicated that the more participants were socialized about the profession's goals and values, the more they identify with their profession in general ($r = .47$, $p = .01$), and the organization where they work ($r = .39$, $p = .05$).

The second research question asked whether there is a significant relationship between physicians' occupational identities and their organizational identities. Interestingly, participants did not view their identities as physicians as being significantly related to their organizational roles as physicians. Instead, participants viewed their occupational identities as significantly related to the socialization process. Specifically, occupational identity was significantly related to physicians' perceptions of socialization about the profession's goals and values ($r = .47$, $p = .01$), as well as perceptions of mutual support ($r = .52$, $p = .00$), and communication ($r = .43$, $p = .03$). Thus, the more physicians perceive mutual support and communication, the more they identify with being a physician. Because the goals and values socialization variables were significantly related to occupational identity, participants saw their identification with being a physician as a component of the professional socialization process.

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Additionally, participants perceived working in teams as significantly related to their identification with their organization. Specifically, their identification with their organization was significantly related to their perceptions of socialization about the value of professional relationships ($r = .75$, $p = .00$), mutual support ($r = .47$, $p = .02$), and communication ($r = .44$, $p = .03$). However, organizational identity and occupational identity components were not significantly related ($r = .30$, $p = .13$). Interestingly, the physicians in this study did not perceive their roles as physicians as centrally related to their identification with their organization.

The third research question asked which, if any dimensions of socialization account for variance in physicians' perceptions of inter-professional communication. Two multiple regression models were performed to assess the potential influences of the physician socialization dimensions on the communication and mutual support aspects of inter-professional communication. The first model included the four socialization predictor variables, history, language, goals and values, and relationships, as well as the criterion variable, communication. Although the overall model was not significant ($r^2 = .33$, $F (4, 18) = 2.21$, $p = .11$), socialization regarding the importance of professional relationships was a significant positive predictor of communication ($\beta = .51$, $p = .02$). The other three predictor variables were non-significant: history ($\beta = .22$, $p = .42$), language ($\beta = -.09$, $p = .77$), goals and values ($\beta = .08$, $p = .77$).

A similar multiple regression was performed to further assess aspects of physician socialization as predictors of the criterion variable, mutual support. This model was marginally significant ($r^2 = .39$, $F (4, 18) = 2.91$, $p = .05$), but the only significant predictor of mutual support was socialization regarding the importance of professional

relationships ($\beta = .59$, $p = .01$). The other three predictor variables were non-significant: history ($\beta = .04$, $p = .89$), language ($\beta = .09$, $p = .75$), goals and values ($\beta = .01$, $p = .98$).

Overall, when controlling for socialization about the profession's history, language, and goals and values, socialization about the value of professional relationships accounted for approximately 51% of the variance in participants' reporting of effective communication, and nearly 60% of the variance in participants' reporting of mutual support.

Summary of Results

This chapter reported results for two hypotheses and three research questions. In summary, physicians' socialization about the history behind their profession and the medical language are not related to their perceptions of mutual support and communication during inter-professional communication with other providers (H1). However, the more physicians are socialized to value inter-professional relationships, the more they perceive a need for mutual support and communication among healthcare providers (H2). Specifically, socialization about the value of professional relationships predicts more than 50% of the variance in both mutual support and communication in inter-professional relationships (RQ3). Further, when physicians are socialized about the profession's goals and values, they are more likely to identify with being a physician and feel more connected to the organization where they work (RQ1). Although physicians do not view their occupational identities as related to their organizational roles, they do perceive their occupational identities to be related to their professional socialization process. Conversely, physicians perceive inter-professional communication as a part of their organizational role, and not a part of their identity as a physician (RQ2).

CHAPTER V

Discussion

This chapter discusses the hypothesized and exploratory results of the present study. The first section reviews the argument set forth in the thesis. The second section offers interpretations for the supported hypothesis. The third section discusses and interprets the research questions. The fourth section discusses the results for the unsupported hypothesis and provides possible explanations for the findings. The fifth section discusses implications of the study. The sixth section of this chapter addresses limitations of this study. The seventh section offers possible directions for future research. Finally, a summary of the chapter is provided.

Review of Argument

The purpose of this study was to examine physicians' perceptions of the professional socialization process and subsequent professional identities as a factor related to the predicted value of inter-professional communication. POV was operationalized as the professional socialization of physicians into the profession, and functioned as a lens for examining how socialization acts as a process of impression formation for physicians. By examining the interplay of physicians' perceptions of their profession's history, language, goals and values, relationships, occupational identity, and their subsequent perceptions of mutual support, communication, and organizational identity, this thesis posited that physicians' POV judgments of collaborations with other healthcare providers begins during the professional socialization process, and prior to initial interactions. It is argued that the value of such inter-professional interactions is assigned based on the communication process rather than the communication with a

specific individual. To support this argument, the following claims were set forth. First, medical students form a professional identity (Simpson, 1967) as they learn what it means to be a physician, in terms of the profession's history, specialized language, goals and values, and relationships (Chao et al., 1994). Second, physicians form perceptions about inter-professional communication in terms of mutual support and communication, which has implications for future interactions (American Institutes for Research, 2010; Myer et al., 1993). Third, because physicians typically learn about their professional role informally and outside of the classroom, their perceptions about inter-professional communication are likely influenced by role models with whom they interact (Korsch & Harding, 1997; Mann et al., 2005; Rogers et al., 2013) during the professional socialization process. Several studies have found support for the idea that identity formation occurs outside of the traditional classroom (Barry et al., 2000; Kuziemsky et al., 2009; Sibbald et al., 2013) yet it's connection to the professional socialization process is under-researched.

Supported Hypothesis

The supported hypothesis predicted that physicians' socialization about the value of professional relationships would be significantly related to their perceptions of mutual support and communication. In other words, physicians who are exposed to increased socialization about the value of collaborating with other providers are more likely to perceive a need for inter-professional communication on the job. This result provides direct support for using POV in the context of professional socialization. It makes sense that the more knowledgeable a physician is about the value of establishing and maintaining positive professional relationships, the better able they are to recognize a

need for mutual support categorized as trust, mutual respect, cooperation, coordination, and shared responsibility, as well as communication that seeks to enhance the group climate. According to the data, physicians in this study did form impressions about inter-professional communication during the professional socialization process, as suggested by this study's use of POV. This result extends POV beyond initial interactions, in that these physicians formed opinions about whether to avoid, restrict, or seek out inter-professional interactions during the professional socialization process. In Mickan and Rodger's (2005) study, physicians reported developing a sense of camaraderie with fellow HCPs with whom they worked for extended periods of time. These physicians exhibited a unique and identifiable team spirit that included sharing enjoyment and taking pride in their achievements. The quality of the professional relationships that physicians form in the workplace affects how they will be accepted by their colleagues in the future (Chao et al., 1994). Therefore, when physicians witness such benefits of establishing positive professional relationships, it makes sense that they would continue to work to maintain such relationships in order to reap similar benefits in the future. In an effort to maintain positive relationships, physicians may initiate a greater than average number of positive communication instances such as, ensuring clarity and paying special attention to detail when providing information about a patient, or attempting to enhance the group climate by making sure everyone feels involved (American Institutes for Research, 2010).

This finding that increased socialization about the value of professional relationships yields increased instances of inter-professional communication on the job is important for physicians in modern healthcare. Under the Affordable Care Act,

physicians are paid based on the level of quality care given to patients (U.S. Department of Health & Human Services, 2013). Because patients receive the best quality of care from coordinated groups of HCPs who work together (U.S. Department of Health & Human Services, 2013), developing successful professional relationships in the workplace is the first step toward achieving successful inter-professional communication between physicians and other HCPs.

Evidence suggests that communication patterns initiated during medical school are generally perpetuated throughout physicians' careers, and can exert a powerful influence on a physician's occupational identity or what being a physician means to them (Haidet et al., 2008). Additionally, Norgaard et al. (2012) found that learning effective communication skills increases physicians' self-efficacy in relation to communication with colleagues. Thus, because physicians learn the importance of relationships and inter-professional communication in part from watching their colleagues during the professional socialization process (Barry et al., 2000; Haidet et al., 2008; Kuziemsky et al., 2009; Sibbald et al., 2013), it is important for physicians to continue to model instances of mutual support and effective communication not only during medical school and residency, but also throughout their careers.

In sum, the Affordable Care Act requires physicians to collaborate to form Accountable Care Organizations The supported hypothesis suggests that in order to best comply with such provisions of the Affordable Care Act, the professional socialization process for physicians should reflect an increased emphasis on the importance of forming and maintaining professional relationships in the workplace. The use of POV in this study provides further support for this assertion, given that these physicians formed impressions

about the value of inter-professional communication during their socialization into the profession, and prior to initial interactions with co-workers. By shifting greater attention to the importance of professional relationships, physicians should become more receptive to the idea of engaging in inter-professional communication with other HCPs. Ideally, over time, physicians will reshape their professional identities to include inter-professional communication.

Review of Research Questions

Two research questions asked how physicians' perceptions of their socialization impact their occupational and organizational identities, as well as whether physicians' occupational and organizational identities are related. The results provide important insight into how the professional socialization process is related to physicians' identity formation.

Results of the first research question determined that increased socialization about the profession's goals and values is significantly related to physicians' occupational identities and organizational identities. First, physicians who are socialized about how to maintain the integrity of their profession are more likely to identify with being a physician. It makes sense that when physicians are exposed to information that helps them connect themselves to the larger role of a physician (Chao, 1994; Feldman, 1981), they feel a stronger identification with that professional role. In fact, through the process of internalizing the appropriate behaviors required to uphold the integrity of the profession, physicians develop a sense of alliance with other members of the profession (Beagan, 2001). Because physicians learn about their professional role through the socialization process, and given this study's use of POV, giving physicians more

professionally relevant tasks earlier in the socialization process may speed up their process of forming an occupational identity (Pratt, Roackmann, & Kaufmann, 2006). In the context of POV, Madlock and Horan (2009) offer similar conclusions, pointing out that lasting judgments are made early in the socialization process. Therefore, introducing inter-professional communication early in the socialization process will likely determine whether physicians consider such communication as related to the integrity of their profession.

Pratt et al. (2006) emphasize the power of role models throughout the socialization process, whose enactment of professional goals and values helps shape physicians' ideas about what a physician's role entails. This claim is exemplified in Harter and Krone's (2001) study, where interactions between medical students and role models not only clarified and represented the values of the profession, but medical students also emphasized the instrumental contribution of role models in shaping their perspectives on healthcare. This result provides evidence to suggest the importance of exposing physicians to the goals and values of the profession during the professional socialization process. By internalizing the behaviors that are required of physicians to uphold the integrity of the profession, physicians can conform to such expectations and in turn feel more connected to the profession and fellow physicians.

Second, physicians who are socialized regarding how to maintain the integrity of their profession are also more likely to feel connected to the organization where they work. Given that physicians in this study viewed their occupational and organizational identities as unrelated, it is puzzling that the more information they receive about the professionalism associated with being a physician, the more they feel connected to their

organization. Beagan (2001) explains that learning how to be a physician involves a continuous role play. She explains that often when new physicians start to feel as though they belong in one part of the hospital, they are moved to a new rotation. When this happens, they again begin to feel as though they do not belong, and combat this uncertainty by "playing the part" of a competent physician. Therefore, physicians in the current study may fall back on their knowledge about the goals and values of their profession when becoming acquainted with the organization where they work. In doing so, they are able to reduce their uncertainty, feel more confident in the new environment and in turn, feel a sense of belonging to their organization. This result suggests that exposure to the goals and values associated with being a physician and upholding the integrity of that position, can help physicians feel more connected not only to their profession, but also to the organization where they work.

Results of the second research question determined that physicians do not view their identities as physicians as significantly related to their organizational roles as physicians. Instead, they viewed their occupational and organizational identities as two separate entities. Occupational identity was viewed as a part of the professional socialization process. Conversely, physicians perceived inter-professional communication as a requirement of their organizational roles, but not related to their professional roles as physicians. Interestingly though, the more physicians perceived the mutual support and communication dimensions of inter-professional communication, the more they identified with being a physician.

Prior research supports the notion that physicians view their occupational identities as different from their organizational identities. When physicians in Pratt et

al.'s (2006) study experienced a conflict between their occupational and organizational identities, they turned to their organizational identities for guidance on how they should behave in a given situation. This could explain why physicians in the present study reported inter-professional communication as related to their organizational identities rather than their occupational identities. Perhaps because different organizations have different expectations for physicians with regard to inter-professional communication (Conn et al., 2012), physicians consult their organizational identities when faced with questions about such collaborative communication. It is also likely that physicians consult their organizational identities to help them better understand their work (Pratt et al., 2006).

Under the Affordable Care Act, such separations of organizational and occupational identities by physicians are not ideal. The Affordable Care Act is focused on developing centralized teams of HCPs to deliver care to patients where and when they need it, and in a manner that they can understand (American College of Physicians, 2011). What this means for physicians is that they need to consider inter-professional communication as a part of their role as physicians and not just as something that is required by the organization where they work. Perhaps it is for this reason that the Affordable Care Act encourages innovations in health workforce training, recruitment, and retention of such information (Democratic Policy Committee, 2010).

Although physicians in this study did not see their organizational identities as related to their occupational identities, the more they perceived mutual support and communication, the more they identified with being a physician. This result raises the question of why these two dimensions of inter-professional communication are related to

occupational identity. It seems that this result aligns with Myer et al.'s (1993) contention

that when physicians' involvement in the profession is perceived as a satisfying

experience, they develop a stronger identification with their profession. On the other

hand, a rejection from other HCPs may be internalized in a way that affects their actual

job performance. Such internal attributions would likely require them to attempt to regain

their identities as physicians (Heckman, Bigley, Steensma, & Hereford, 2009). Because

responses from other HCPs can function to confirm or disconfirm a physician's

occupational identity (Beagan, 2001), it would make sense that the more mutual support

and positive communication physicians receive from their colleagues, the more they

identify with being a physician.

Results of the third research question provide initial support to extend the scope

of POV beyond initial interactions. Physicians in this study indicated that the information

they received about their profession during the professional socialization process, had a

direct effect on their perceptions of inter-professional communication in their current

workplace. Given that physicians learn most of the information about their profession

during informal discussions (Barry et al., 2000), it is not surprising that their perceptions

of inter-professional communication reflect the information received during on-the-job

professional socialization in medical school and residency.

This result is important for physicians in modern healthcare, as the value that

physicians assign to inter-professional communication is now billable under the

Affordable Care Act. With the increasing popularity of team-based approaches to patient

care, physicians are required to communicate inter-professionally, and are paid based on

the quality of care given to patients (U.S. Department of Health & Human Services,

2013). Thus, understanding the process through which physicians assign value to these inter-professional interactions is important. Additionally, physicians should be cognizant of the fact that it is the patients who are affected by the value or lack thereof, that physicians place on inter-professional communication.

Summary of Unsupported Hypothesis

The unsupported findings suggest that not all aspects of the professional identity physicians acquire during the professional socialization process are correlated with perceptions of inter-professional communication. Socialization about the history behind the profession and the specialized language used by physicians are not correlated with perceptions of mutual support or communication. These results suggest that the cultural traditions, myths, and rituals that govern the physician profession have no impact on physicians' perceptions of mutual support or communication. This result is surprising. Unlike physicians in Real et al.'s (2009) study, physicians in this study did not indicate that they perceived themselves as autonomous professionals who have a historically higher status based on their profession. Further, the results also suggest that the technical language, acronyms, slang, and other jargon used by physicians have no impact on their perceptions of mutual support or communication. Physicians spend years becoming integrated into their profession, and acquiring knowledge about the specialized terminology, so it is puzzling that unlike physicians in Real et al.'s (2009) study, physicians in this study did not view such terminology as a tangible way to express their professional roles over others. As Harter and Krone (2001) suggest, it appears as though physicians' traditional professional sovereignty is being challenged by modern approaches to healthcare that emphasize collaboration and shared decision making.

These results provide evidence to suggest that the history and language aspects of the professional socialization process have a different effect on physicians' perceptions of inter-professional communication than other aspects of the socialization process. While the dimensions of the socialization process that promote collaboration are actually correlated with perceptions of a need for inter-professional communication, the history and language dimensions that promote professional autonomy do not have similar effects on discounting perceptions of inter-professional communication. Instead, it appears that receiving information about the history of being a physician and the terminology associated with the profession act independently from physicians' perceptions of inter-professional communication interactions with other HCPs.

This result in turn, strengthens an argument proposed in response to the second research question, that physicians indeed view their occupational identities as physicians as separate from their organizational identities where engaging in inter-professional interactions is a duty associated with their role in the organization. Pratt et al. (2006) suggest that qualities such as prestige and distinctiveness that are promoted in the history and language aspects of the professional socialization process, may help physicians to fulfill their professional affiliations, or for our purposes their occupational identities.

Implications of Study

The current study has several implications for the communication discipline. Implications for the health and instructional contexts are offered in this section.

Health Communication Implications. The data from this study suggest that physicians' inter-professional communication with other HCPs has implications that extend far beyond the bounds of the educational environment of medicine. This study

reveals that physicians' occupational identities are formed in part during the professional socialization process. We also know that physicians continue to enrich and reshape their identities throughout the socialization process (Pratt et al., 2006). Thus, physicians need to be aware that junior physicians and colleagues are constantly observing their communicative behaviors and using that information to redefine how they view their own roles as physicians. Based on the many benefits associated with engaging in successful inter-professional interactions (Bennett &Lyons, 2011; Mickan & Rodger, 2005; Norgaard et al., 2012; Villagran & Baldwin, 2013), physicians should be working to model instances of mutual support and effective communication with other HCPs. Mutual support can be demonstrated through trust, respect, cooperation, coordination, and sharing responsibilities, while effective communication is achieved through ensuring clarity, paying special attention to detail when providing information, and working to enhance the group climate by making sure that everyone feels involved (American Institutes for Research, 2010).

The Affordable Care Act requires physicians to engage in collaborative strategies to ensure that the quality and continuity of care is maintained for patients (American College of Physicians, 2011). The data from this study suggest that physicians who are socialized about the importance of developing and maintaining positive professional relationships in the workplace are more receptive to the need for mutual support and effective communication among HCPs. The data also suggest that physicians view inter-professional communication as something that is specific to the organization where they work rather than something that constitutes their role as a physician. Thus, physicians should focus their efforts on understanding why professional relationships are important,

in an effort to internalize inter-professional communication as specifically related to being a physician, rather than something that varies from organization to organization. This shift in physicians' thought processes about their identities is necessary, as the Affordable Care Act requires all physicians to engage in inter-professional communication interactions. The optionality of engaging or not engaging in inter-professional communication is a thing of the past for physicians. Therefore, reshaping how they think about inter-professional communication in relation to their role as physicians is imperative, and can be achieved by focusing more closely on their relationships with fellow HCPs in the workplace.

The results of this study determined that the more physicians feel socialized about the goals and values of their profession, the more they feel connected to actually being a physician. This information is important because as patients, we want to know that our physicians view their role as more than just a job, and internalize their responsibilities as a part of who they are, rather than what they do. During medical education, physicians are professionalized in a way that helps them to function under stress, maintain focus, make the right diagnosis, and perform the appropriate procedures in a fast paced environment (Korsch & Harding, 1997). In turn, physicians' values and skills are aligned to match the profession's overall goals (Mann et al., 2005). Thus, for physicians, a clear understanding of the rules, norms, and standards that are required to maintain the integrity of their roles help them feel more connected to their profession as well as to other physicians. In turn, when faced with uncertain situations such as a change in environment, surroundings, or workgroup, physicians can cope with such uncertainty knowing that they are a part of a larger bond that is shared among all physicians, rooted

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in a common worldview and commitment to uphold the integrity of the profession. Physicians should find comfort in knowing that by maintaining a connection to their profession and all of the responsibilities that it entails, they should be able to adapt to any change in their work environment, including required inter-professional interactions with other HCPs.

Instructional Communication Implications. The data from this study suggests that emphasizing the importance of inter-professional communication during medical education is an important step towards ensuring that medical students internalize such communication as a part of their occupational identity as a physician. Physicians who are exposed to the value of inter-professional relationships appear to be more receptive to inter-professional interactions in the workplace. Such interactions foster a collaborative work environment categorized by trust, mutual respect, clear and accurate communication, and a shared workload. In order for physicians to understand the importance of inter-professional communication as it is required by the Affordable Care Act, medical educators need to transition their efforts to create a formalized curriculum that teaches students about the importance of inter-professional communication, something that is currently lacking in many programs (Northouse & Northouse, 1998; Rogers et al., 2013). In addition to teaching this information, educators also need to enact these behaviors. Residents use their medical school experiences as one of their first sources for making sense of their role as physicians (Pratt et al., 2006). Therefore, the effective or ineffective modeling of curriculum concepts by instructors, senior residents, and attending physicians impacts students' occupational identity formation (Korsch & Harding, 1997; Mann et al., 2005; Rogers et al., 2013). It is for this reason that the

information students learn about inter-professional communication in the classroom should mirror the communicative behaviors of their role models.

Although physicians have traditionally been socialized as autonomous healers and have dominated the medical hierarchy (Hartzband & Groopman, 2011; Northouse & Northouse, 1998; Villagran & Weathers, 2014), data from this study reveal that increased socialization about the profession's traditional history and highly specialized language do not alter physicians' perceptions of inter-professional communication with other HCPs. Therefore, learning such aspects about the profession may actually function to connect students to their notions of what it means to be a physician, as well as strengthen the bond shared between physicians through the formation of a common occupational identity. For this reason, medical education should continue to inform students about the profession's culture, with regard to its long held traditions, rituals, jargon, and thought processes unique to the profession. Fortunately, medical education programs appear to be taking a step towards breaking traditional hierarchical barriers, by socializing students about the profession in ways that do not positively or negatively influence their subsequent perceptions of inter-professional communication with other HCPs. In the future, medical education needs to continue to move towards socializing students about the profession in ways that promote inter-professional interactions that are required in the practice of modern healthcare.

Limitations

Several limitations to the current study exist. The first limitation concerns the relatively small number of participants included in the sample of this study. With 29 participants, it is difficult to generalize the results of the study to the general population

of physicians. However, experts suggest that in order for parametric tests to be used, an adequate sample size of at least 5 - 10 observations per group must be reported (Jamieson, 2004). Moreover, real and simulated data provide evidence that parametric tests are more accurate and robust than non-parametric tests, even when statistical assumptions such as a normal distribution or sample size are violated (Norman, 2010). The fact that statistical significance was detected in the current study suggests that the effect sizes are large in spite of the relatively small sample. It is also possible that additional effects are present in the study, yet undetectable given the small sample size.

A second limitation concerns the lack of cohesive groups of physicians by subspecialties. Due to the small sample size, we could not examine the variability among physicians throughout the trajectory of their careers to determine if differences exist based on the *type* of physician and their status in the profession or organization. Because physicians are steered towards different subspecialties of medicine based on their communication skills (Conn et al., 2012), it is likely that the results of this study would differ based on whether the participant was a resident, attending physician, family medicine physician, oncologist, or surgeon. Future research could replicate this study using such subspecialties of physicians to determine if inter-professional communication is viewed as more or less favorable based on the exact task roles of physicians.

A final limitation concerns the research design, which only describes the correlations among the variables in the study, and only provides initial reports of causal relationships between such variables. The use of more advanced, predictive statistics was not used in this preliminary pilot study. We refer to this as a pilot study for a larger examination of the topic. This thesis posits that the professional socialization process is a

dynamic process that continues to evolve throughout the physician's education, training, and subsequent role as a practicing physician. The findings provide useful information about how the socialization process impacts physicians' perceptions about inter-professional communication. However, the findings do not reveal when in the socialization process physicians' perceptions about inter-professional communication were formed and or changed. Thus, it cannot be assumed that professional socialization was the cause of any variance in participants' perceptions about inter-professional communication. This study posits that such variables are merely related. The effects of confounding variables in the present study are unknown.

Directions for Future Research

Future research should focus on four areas: the temporal dimension of professional socialization, the role of inter-professional communication in identity formation, the role of the traditional medical hierarchy in modern healthcare, and the continued extension of POV in the socialization process. First, researchers should work towards determining if the point at which physicians receive information about their profession during the professional socialization process, impacts their perceptions about their roles as physicians. Such information could provide insight into when medical education curricula should formally introduce certain concepts to future physicians, and further explain the impact of role models during the formal and informal training processes that occur during programs of residency.

Second, research should continue to investigate communication surrounding the inter-professional interactions between physicians and medical professionals such as nurses, nurse practitioners, physician assistants, physical therapists, social workers,

technicians, clinicians, paramedics, and the like. We need to understand why physicians do not view inter-professional communication as a part of their identities as physicians. Such information will enable us to alter how messages are introduced during the professional socialization process, in ways that align with the professional identities of modern-day physicians.

Third, future research should consider the current state of the traditional medical hierarchy in modern healthcare. Physicians are being exposed to the profession's traditional history and specialized language during the professional socialization process. However, such information does not appear to have a negative impact on physicians' perceptions of inter-professional communication in the workplace. Yet physicians are still not internalizing inter-professional communication as central to their professional role. Researchers should further investigate physicians' perceptions of their place in the medical hierarchy to begin to understand what additional factors they may consider when forming impressions about their role. While the government has transitioned the American healthcare system to incorporate collaborative approaches to medicine, the disruption to the traditional medical hierarchy may have significant implications for actual behavior change. By understanding where physicians position themselves in relation to other HCPs in modern medicine, researchers will be better prepared to help physicians make the transition from autonomous healers to team players.

Finally, future research should continue to examine POV in the context of professional socialization. Although this study provides preliminary support for the idea that physicians form impressions about inter-professional communication prior to initial HCP interactions, this study does not identify exactly which information causes

physicians to value specific dimensions of inter-professional communication. Future

research should work to determine what specific information physicians receive during

the socialization process, and how they attribute the value of that information to future

inter-professional communication interactions with non-physician HCPs. Determining

exactly what physicians are being socialized about, and how that information impacts

their value judgments about inter-professional communication, will allow researchers to

understand exactly how POV functions during the professional socialization process.

Summary of Thesis

This study examined the relationship between physicians' professional

socialization, and inter-professional communication. Specifically, this study sought to

determine how professional socialization variables about the profession's history,

language, goals and values, relationships, and occupational identity were related to the

inter-professional communication variables, mutual support, effective communication,

and organizational identity.

Results indicated that socialization about the history and language of the

profession are not related to physicians' perceptions of mutual support and

communication. On the other hand, the more physicians are socialized to value

professional relationships in the workplace, the more they perceive a need for mutual

support and communication among healthcare providers.

Results for the research questions indicate that when physicians experience

increased socialization about the profession's goals and values, they are more likely to

identify with being a physician and feel more connected to their organization.

Additionally, physicians do not view their occupational identities as related to their

organizational roles. However, they do perceive their occupational identities as a part of the professional socialization process. Interestingly, physicians perceive inter-professional communication as a part of their organizational role, and not a part of their identity as a physician.

The results of this thesis provide support for the continued use of POV as a theoretical foundation in the context of professional socialization. Physicians in this study reported that greater exposure to information about the importance of professional relationships during the socialization process, were related to their perceptions of inter-professional communication in the workplace. This thesis provides foundational support for combining Jablin's (2001) organizational socialization model with Sunafrank's (1986) POV theory to extend POV beyond initial interactions.

Table 1: Basic Participant Demographics (*N = 26*)

Sex	%
Males	41.4
Females	48.3
Ethnicity	**%**
White/Non-Latino	55.2
Asian	24.1
African American/Black	3.4
Indian	3.4
Puerto Rican	3.4

Table 2: Physician-Specific Participant Demographics (*N = 26*)

I am a…	%
MD	69
DO	3.4
Attending Physician	27.6
Resident	13.8
I primarily practice medicine in a…	**%**
Private Practice	6.9
Public Clinic	6.9
Hospital	79.3
The organization where I am most likely to work in a healthcare provider team is…	**%**
Private Practice/Public Clinic	17.2
Hospital	75.9

Table 3: Means, Standard Deviations, and Cronbach's Alphas by Measure

Professional Socialization	M	SD	α
History of Profession	5.29	1.27	.90
Language of Profession	5.67	.82	.79
Goals and Values of Profession	5.42	.85	.88
Relationships	5.36	.77	.71
Occupational Identity	5.57	.94	.77
Inter-Professional Communication	M	SD	α
Mutual Support	5.03	1.11	.91
Communication	5.04	.95	.81
Organizational Identity	4.92	1.32	.90

Table 4: Professional Socialization and Inter-Professional Communication Correlations

Professional Socialization	Mutual Support	Communication
History of Profession	.14	.19
Language of Profession	.23	.19
Goals and Values of Profession	.24	.26
Relationships	.61**	.54**

Note: *p ≤ .05 and **p < .01

Table 5: Identification and Inter-Professional Communication Correlations

	Mutual Support	Communication	Relationships	Occupational Identity
Occupational Identity	.52*	.43*	.35	----
Organizational Identity	.47*	.44*	.75**	.30

Note: *p ≤ .05 and **p < .01

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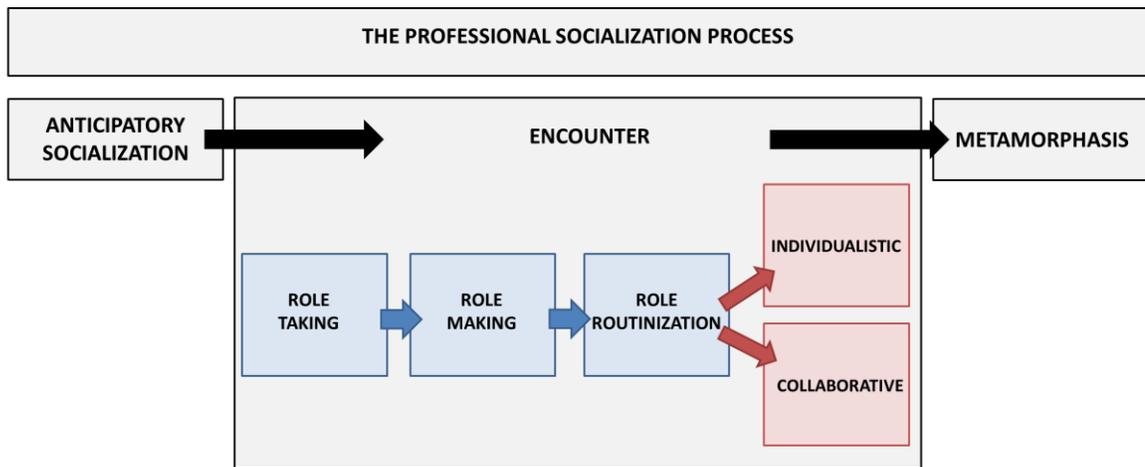
Figure 1: Professional Socialization Model
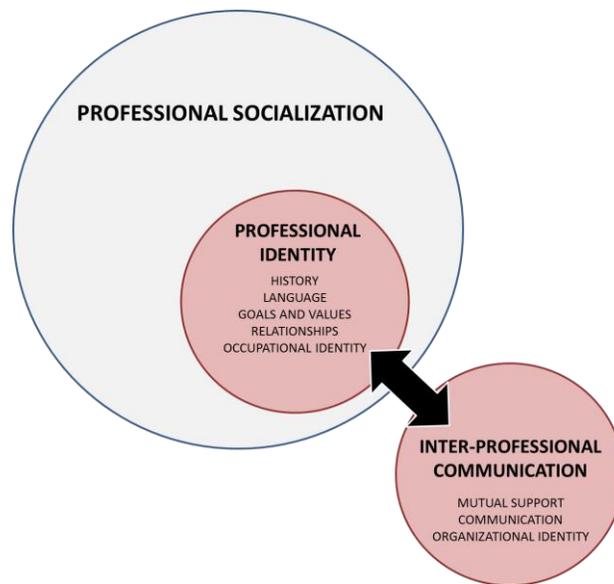
Figure 2: Study Model

APPENDIX SECTION

APPENDIX A: CONSENT FORM

This project [2013R9137**]** was approved by the Texas State IRB on 9/25/2013. Questions or concerns about the research, participants' rights, and/or research-related injuries to participants should be directed to the IRB chair, Dr. Jon Lasser (lasser@txstate.edu) and Becky Northcut, Director, Research Integrity & Compliance (bnorthcut@txstate.edu). This study is conducted by Brenda MacArthur (bmacarthur@txstate.edu) and is funded by the Graduate College at Texas State University.

Overview : You are invited to share your experiences as a physician. To be eligible to participate, you must currently work in a healthcare team comprised of at least 2 medical professionals working together to deliver patient care. This team may be comprised of physicians, nurses, technicians, etc., and will probably be unique to your organization, location, and/or shift. If you decide to participate, you will be asked questions about your current profession, and team experience. Your answers are based solely on your opinion. There are no right or wrong answers. This survey should take approximately 10 - 12 minutes to complete. Because you are asked to recall an experience there is no physical or psychological risk involved. By participating in this study you are contributing to research focused on enhancing communication among healthcare providers.

Confidentiality: Your responses will be confidential. Information obtained in connection with this study will not be disclosed in a way that can be traced to you. In any written reports or publications, no participant other than the researchers will be identified, and only anonymous data will be presented. This consent form will be stored separately from the data collected. Your participation is voluntary, and your decision to participate will not affect your future relations with Texas State University, or its employees in any way.

Participation: To express appreciation of your time, all participants will receive a $15 Starbucks gift card. Upon completion of the survey you will be directed to another site to enter an email address where you would like the e-gift sent. This information will be stored independently of your responses. By signing below, you are consenting to participate in this study. Your signature indicates only that you are at least 18 years of age and have read the information provided above. Your signature does not obligate you to participate, and you may withdraw from the study at any time without consequences.

_____   _____

Signature   Date

APPENDIX B: PROFESSIONAL SOCIALIZATION INSTRUMENT

Instructions: The following questions focus **on your current views** of physicians as professionals. (e.g. **your profession = "being a physician")**. Please consider things you know about being a physician. Please use the following scale to indicate your level of agreement that the item applies to you:

> 1 = Strongly Disagree
> 2 = Somewhat Disagree
> 3 = Disagree
> 4 = Neutral
> 5 = Somewhat Agree
> 6 = Agree
> 7 = Strongly Agree

History
__ 1. I know very little about the history behind my profession as a physician.*
__ 2. I am not familiar with my profession's customs, rituals, and ceremonies.*
__ 3. I know my profession's long held traditions.
__ 4. I am a good resource for people seeking information about the physician profession.
__ 5. I am familiar with the history of my profession.

Language
__ 6. I have mastered the specialized terminology and vocabulary of my profession.
__ 7. I have not mastered this profession's slang and special jargon.*
__ 8. I do not always understand what the profession's abbreviations and acronyms mean.*
__ 9. I understand the specific meanings of words and jargon in my profession.
__ 10. I understand what most of the acronyms and abbreviations of my profession mean.

Goals and Values
__ 11. I would be a good representative of my profession.
__ 12. The goals of my profession are also my goals.
__ 13. I believe that I fit well with my organization.
__ 14. I do not always believe in the values set by my profession.*
__ 15. I understand the goals of my profession.
__ 16. I would be a good example of an employee who represents my profession's values.
__ 17. I support the goals that are set by my profession.

Instructions: Now we would like to ask you about your experience working in a healthcare team to deliver patient care. Please focus on your experiences working with other providers to deliver care to a patient. A "team" might consist of nurses, technicians, social workers, subspecialists, other physicians, etc). Please answer the following questions in regard to **your healthcare team.**

People
__ 18. I do not consider any of my team members as my friends.*
__ 19. I am usually excluded in social get-togethers given by other members of my team.
__ 20. I would be easily identified as "one of the gang" by other members of my team.
__ 21. I am usually excluded from informal networks or gatherings by members of my team.*
__ 22. I am pretty popular with the members of my team.
__ 23. I believe that most of the members of my team like me.

Note: * indicates that item is reverse-scored.

APPENDIX C: AFFECTIVE OCCUPATIONAL COMMITTMENT INSTRUMENT

Instructions: The following questions focus **on your current views** of physicians as professionals. (e.g. **your profession = "being a physician")**. Please consider your beliefs about being a physician. Please use the following scale to indicate your level of agreement that the item applies to you:

> 1 = Strongly Disagree
> 2 = Somewhat Disagree
> 3 = Disagree
> 4 = Neutral
> 5 = Somewhat Agree
> 6 = Agree
> 7 = Strongly Agree

__ 1. Being a physician is important to my self-image.
__ 2. I regret having entered the physician profession.*
__ 3. I am proud to be a physician.
__ 4. I dislike being a physician.*
__ 5. I do not identify with the physician profession.*
__ 6. I am enthusiastic about being a physician.

Note: * indicates that item is reverse-scored.

Instructions: We would like to ask you about your experience working in a healthcare team to deliver patient care. Please focus on your experiences working with other providers to deliver care to a patient. A "team" might consist of nurses, technicians, social workers, subspecialists, other physicians, etc). Please answer the following questions in regard to **your healthcare team.** Use the following scale to indicate your level of agreement that the item applies to you:

> 1 = Strongly Disagree
> 2 = Somewhat Disagree
> 3 = Disagree
> 4 = Neutral
> 5 = Somewhat Agree
> 6 = Agree
> 7 = Strongly Agree

Communication
__ 1. Information is discussed with patients and their families by my team using language they understand.
__ 2. All members of my team relay relevant information in a timely manner.
__ 3. When communicating with patients, all members of my team allow enough time for questions.
__ 4. All members of my team use common terminology when communicating with each other.
__ 5. All members of my team verbally verify information that they receive from one another.
__ 6. All members of my team follow a standardized method of sharing information when handing off patients.
__ 7. All members of my team seek information from all available sources.

Mutual Support
__ 8. All members of my team assist fellow members during high workload.
__ 9. All members of my team request assistance from fellow staff when they feel overwhelmed.
__ 10. All members of my team caution each other about potentially dangerous situations.
__ 11. Feedback between all team members is delivered in a way that promotes positive interactions and future change.
__ 12. All members of my team advocate for patients even when their opinion conflicts with that of a senior member of the unit.
__ 13. When a member of my team has a concern about patient safety, they challenge others until they are sure the concern has been heard.
__ 14. All members of my team resolve their conflicts, even when the conflicts have become personal.

APPENDIX E: AFFECTIVE ORGANIZATIONAL COMMITMENT INSTRUMENT

Instructions: We would like to ask you about your experience working as a physician in your organization. An "organization" refers to the place where you practice medicine (i.e. hospital, public practice). Please answer the following questions in regard to **the organization where you currently practice medicine**. Use the following scale to indicate your level of agreement that the item applies to you:

1 = Strongly Disagree
2 = Somewhat Disagree
3 = Disagree
4 = Neutral
5 = Somewhat Agree
6 = Agree
7 = Strongly Agree

__ 1. I would be very happy to spend the rest of my career with this organization.
__ 2. I really feel as if this organization's problems are my own.
__ 3. I do not feel a strong sense of belonging to my organization.*
__ 4. I do not feel emotionally attached to this organization.*
__ 5. I do not feel like part of the family at my organization.*
__ 6. This organization has a great deal of personal meaning for me.

Note: * indicates that item is reverse-scored.

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