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Professional Identities of Nursing Faculty in the Mountain States of the United States: Identity as  
a Framework to View Incivility in Nursing Education

by

Jayson Lloyd

A dissertation proposal  
submitted in partial fulfillment  
of the requirements for the degree of  
Doctor of Education in the Department of School Psychology and Educational Leadership  
Idaho State University  
Spring 2021

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## Committee Approval

To the Graduate Faculty:

The members of the committee appointed to examine the dissertation of Jayson E Lloyd, find it satisfactory and recommend that it be accepted.

---

Richard Wagoner, Ph.D.  
Major Advisor

---

Chung-Hau (Howard) Fan, Ph. D.  
Committee Member

---

Susan T. Kater, Ph.D.  
Committee Member

---

Bernice Sanchez, Ph.D.  
Committee Member

---

Craig M. Chatriand, Ph.D.  
Graduate Faculty Representative

## Human Subjects Committee Approval

June 12, 2020  
Jayson Lloyd  
Educ Leadership  
MS 8059

RE: Study Number IRB-FY2019-266: Nursing Faculty Professional Identities

Dear Mr. Lloyd:

Thank you for your responses to a previous review of the study listed above. I agree that this study qualifies as exempt from review under the following guideline: Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording). The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects. This letter is your approval, please, keep this document in a safe place.

Notify the HSC of any adverse events. Serious, unexpected adverse events must be reported in writing within 10 business days.

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Please note that any changes to the study as approved must be promptly reported and approved. Some changes may be approved by expedited review; others require full board review. Contact Tom Bailey (208-282-2179; fax 208-282-4723; email: humsubj@isu.edu) if you have any questions or require further information.

Sincerely,  
Ralph Baergen, PhD, MPH, CIP  
Human Subjects Chair

## Acknowledgements

This work was possible because of the support provided by so many kind and wise individuals. The guidance and feedback provided by Dr. Wagoner, especially considering his efforts to stay connected with students located in Twin Falls, was greatly appreciated and immensely valuable. At the end of the project, I find myself thinking “Ah, that’s what Dr. Wagoner meant when he said a dissertation is like an iceberg!” Additionally, I must recognize Dr. Alan Frantz and Dr. Mark Neill who started this journey with me but have since moved on to “bigger and better things” such as retirement.

To my colleagues at the College of Southern Idaho who have inspired me, guided me, made me feel guilty, nagged me, and spent hours assisting me in this research...thanks! Finally, I must recognize the love and support of my parents, my wife, and my children. If anything, this research has taught me that the most important and meaningful identities I carry are those of son, father, and husband.

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Professional Identities of Nursing Faculty in the Mountain States of the United States: Identity as  
a Framework to View Incivility in Nursing Education

Dissertation Abstract – Idaho State University (2021)

The purpose of this study was to use a quantitative online survey to investigate the professional identities held by nursing faculty teaching in registered nursing programs in the Mountain States of the United States. Identity refers to the sets of meanings/factors that define who one is while one is fulfilling a specific role in society or acting as a member of a specific group (Burke & Stets, 2009). These sets of meanings and factors ultimately establish behavioral expectations for the role (Stryker & Burke, 2000).

The lens of identity theory guided the development of the survey and allowed me to investigate what items and factors are salient to the reported identities of nursing faculty and how these identities compare to the perceived counter identities of nursing student, practicing nurse, and physician. Using exploratory factor analysis, I determined the factors associated with nursing faculty, nursing student, practicing nurse, and physician identities (Burke & Tully, 1977).

Exploratory factor analysis demonstrated that nursing faculty archetypal identity was most similar to nursing student archetypal identity, followed by practicing nurse and lastly physician archetypal identities. Demographics had little effect on respondent feedback. Loaded items for nursing faculty, nursing student, and practicing nurse archetypal identities demonstrated patterns that supports Roberts (1983) hypothesis that the nursing profession exists in an oppressed state. Leaders, therefore, may find value in using the lens of oppression theory to understand and ameliorate incivility in nursing education and perhaps nursing practice in general.

*Key Words:* Nursing Education, Identity, Incivility, Oppression

## **Chapter 1**

### **Introduction**

Nursing faculty perform a vital role in the education and training of professional nurses in the United States. It was not until the late 1940's, however, that nursing faculty began educating nursing students in the community colleges, comprehensive colleges, and universities of the United States. Before that time, approximately one hundred and fifty years ago, hospital-based and hospital-own schools first established formal programs to train nurses (Lynaugh, n.d.).

Multiple factors drove the shift from hospital-based training to training in higher education institutions. Perhaps the biggest factor creating change was the increasing complexity of nursing work. After World War II, advancing technologies required nurses to provide health care previously unavailable. Consequently, nurses had to monitor a wider range of patient needs and provide appropriate care (Lynaugh, n.d.). Because of this increasing complexity and new job expectations, previous on-the-job training, which emphasized following routines, was considered inappropriate to train nurses who must think critically and solve problems on their own.

Additionally, patients and health care organizations began to favor care provided by nurses scientifically trained in institutions of higher education instead of care provided by hospital-based student nurses (Lynaugh, n.d.).

Currently there are just under three million registered nurses working in the United States (Bureau of Labor and Statistics, 2018). The majority of these nurses studied in one of the 1,869 basic registered nursing programs that exist in the post-secondary institutions of the United States (National League for Nursing, 2014). Transferring the education of nurses from hospital-based programs to post-secondary institutions has allowed the United States to bolster its nursing population, growing the population of nurses from the 300,000 nurses that existed in 1940, to the



nearly three million that exist today (Lynaugh, n.d.).

Some researchers argue that the shift from training nurses in hospital-based programs to training nurses in scientifically based higher education programs also represents a transformation in the expectations of what it means to be a nurse (Bartholomew, 2006; Lynaugh, n.d.). In hospital-based programs, students performed routine tasks to keep patients safe, clean, well fed, and comfortable. In post-secondary educational programs, students provide the same nurturing functions expected in hospital-based programs, while at the same time deliver expanded care to patients. This expanded care requires nurses to possess advanced knowledge of pathophysiology, medical technologies, and well-developed critical thinking skills (Bartholomew, 2006; Lynaugh, n.d.; Roberts, 1983).

Roberts (1983) proposed that the foundational expectations of what it means to be a nurse, which consist largely of nurturing roles, might exist in a state of opposition and oppression to the more modern role expectations for nurses that value and focus on scientific knowledge and technical skills. The conflict between foundational expectations and more modern expectations for nurses is further enhanced because those in positions of power (e.g. physicians) value science and technical skills as well. Additionally, researchers believe that the oppression of the nursing profession exists because of gender issues (Bartholomew, 2006). Because the nursing profession was founded at a time during which women lacked significant rights and because the profession was composed predominantly of women, it is easy to understand how the nursing profession filled a subordinate role in a patriarchal society. From this establishment, the nursing profession gained a set of female role expectations that nurses still deal with today and as mentioned focus on passive, nurturing service (Bartholomew, 2006; Dargon, 1999; Farrell, 1997; Gordon, 2005; Kanter, 1979; Reverby, 1987). Consequently,

Roberts (1983) argues that nurses treat one another uncivilly as a mechanism to cope with the oppression/opposition they perceive in their roles and work environment.

Not all researchers agree with Roberts' (1983) hypothesis, but most agree that incivility among practicing nurses, nursing faculty, and nursing students is a major problem (Bartholomew, 2006; Clark, 2013; Joint Commission, 2016). Data suggests that incivility in nursing practice and education profoundly impacts the emotional wellbeing of individuals, the physical health of individuals, fiscal state of organizations, employee turnover, employee satisfaction, customer satisfaction, and worker productivity (Bartholomew, 2006; Clark, 2013; Joint Commission, 2012).

### **Statement of Problem/Statement of Purpose**

Several researchers have studied and documented the prevalence and negative consequences of incivility in nursing education. Examples of such research include studies investigating student-to-student incivility, student-to-faculty incivility, and faculty-to-faculty incivility (Babenko-Mould & Laschinger, 2014; Burger et al., 2014; Clark et al., 2013; Clark et al., 2020; Ibrahim & Qalawa, 2016). The negative consequences of incivility include decreased self-esteem, loss of confidence in teaching abilities, significant time expenditures, acerbic effects on the educational process, employee turnover, decreased student satisfaction, disruption of teams, decreased productivity, economic loss, medical errors, increased mistrust, and further acts of incivility (Clark & Springer, 2007b; Luparell, 2004, 2007; Marchiondo et al., 2010; Weber Shandwick, 2011). Researchers have also found that incivility, due to its indirect and covert nature, can lead to more extensive emotional trauma and stress than outright physical abuse to the victims (Mayhew et al., 2004). In addition to documenting the prevalence and negative effects of incivility, researchers have also investigated antecedents to incivility looking for the

factors that promote and foster incivility (J. E. Bartlett et al., 2008).

To ameliorate the deleterious effects of incivility, administrators and nursing faculty need to understand the factors that promote incivility and the root causes of incivility. Researchers have suggested that factors such as lack of administrative support, pressure to meet multiple demands, limited resources, unclear roles and expectations, and lack of conflict management all create a stressful environment in which incivility thrives (Clark, 2013; Clark et al., 2020). However, little research exists to support the claim that these conditions promote incivility in and of themselves or that these stressors are unique to nursing education. In contrast, Burke (1991) draws upon identity theory and proposes that stress is not caused directly by any specific factor but is instead generated when an individual's identity is threatened. When people experience stress because of identity threat, they often utilize uncivil behaviors as coping mechanisms.

Researchers have further proposed that the nursing profession carries incivility as an integral part of the profession's culture because the foundational identities and expectations associated with the nursing profession (typically focused on nurturing) are oppressed by a typically science/technical skill oriented medical environment (Bartholomew, 2006; Roberts, 1983). As such, the foundational nurturing identity is oppressed and threatened constantly. According to oppression theory, oppressed groups take out their feelings of helplessness and inferiority on their peers and propagate incivility (Freire, 2005). Moreover, social science demonstrates that when humans become part of a new group, they adopt the attitudes and behaviors of that group to gain acceptance. This unconscious process is known as assimilation. Hence, the uncivil culture, so well documented in the nursing profession, may be passed onto each new generation of nurses (Bartholomew, 2006).

To investigate whether oppression theory and identity theory may help elucidate incivility in nursing education, one must first measure archetypal nursing faculty identity. One cannot conclude that a group is oppressed without understanding the group's identity and what the group perceives as oppressive to their identity. Additionally, one cannot show that incivility results from stress, derived from identity threat, without first articulating the individual's identity in question. Drawing on the identity theory of Burke and Stets (2009), the purpose of this research was to investigate the archetypal identity of nursing faculty and describe the meaning of the factors that best capture the archetypal identity of nursing faculty.

By understanding the archetypal identity of nursing faculty, those associated with nursing programs may be able to implement policies and procedures that better promote civility by avoiding conditions that lead to identity threat among nurses. Understanding nursing identity may also allow nursing educators to interrupt the assimilation of an uncivil culture by student nurses. Additionally, with archetypal nursing faculty identity defined, researchers may further investigate the link between nursing faculty identity, identity threat, stress, coping mechanisms and incivility. Researchers may also begin to investigate nursing faculty identity and the phenomenon of oppression.

### **Ramifications of Incivility**

Despite the wide-ranging definition of incivility, most researchers agree upon the negative consequences of incivility. Specific research in education has shown that incivility leads to decreased self-esteem, loss of confidence in teaching abilities, significant time expenditures, acerbic effects on the educational process, employee turnover, decreased student satisfaction, disruption of teams, decreased productivity, economic loss, medical errors, increased mistrust, and further acts of incivility (Clark & Springer, 2007b; Luparell, 2004, 2007; Marchiondo et al.,

2010; Weber Shandwick, 2011). Additionally, researchers hypothesize that nursing education propagates the culture that promotes incivility in the nursing profession (Bartholomew, 2006).

In the field of health care, extensive research has demonstrated the negative effects of incivility upon patient safety, employee job satisfaction, employee health, and company profits. For example, Purpora (2010) found that as the perception of incivility increased in health care settings, the quality and safety of patient care decreased. In a national study, researchers found that 47% of healthcare workers intentionally decreased their time at work, 38% intentionally decreased their quality of work, 80% lost time worrying at work, 63% lost time avoiding offenders, and 66% reported decreased personal performance all because of uncivil encounters (Pearson & Porath, 2009). Research has shown that even those who simply witness incivility suffer; just watching other people being treated uncivilly causes the witness to persevere on the event and significantly affects one's ability to perform cognitive tasks (Pearson & Porath, 2009).

### **Previous Incivility Research**

Research concerning incivility in nursing education began in earnest at the turn of the twenty-first century and has continued to grow. Researchers have looked at the prevalence of incivility, the consequences of incivility, and the causes of incivility in nursing education (Babenko-Mould & Laschinger, 2014; Bartlett et al., 2008; Burger et al., 2014; Clark, 2013; Clark & Springer, 2007b; Ibrahim & Qalawa, 2016; Luparell, 2007; Luparell, 2004; Marchiondo et al., 2010; Weber Shandwick, 2011). Researchers have also investigated the effectiveness of interventions to ameliorate incivility in nursing education (Bartholomew, 2006; Burger et al., 2014; Clark, 2013; Palumbo 2018).

### **Connection between Identity, Stress, and Incivility**

Clark (2013) argues from her research that incivility in nursing education exists in a large

part due to the stress experienced by nursing instructors. She proposed that nursing instructors experience heightened stress because of the pressures that arise from working in a health care setting while at the same time training and educating future nurses. Clark also cites limited resources and pressures to publish as factors that create stress for nursing educators (Clark, 2013). Clark et al. (2020) add unclear role expectations, sense of entitlement/superiority, organizational volatility, and technology changes as promoters of incivility as well.

In contrast to Clark, Burke (2009) argues that stress, which may lead to uncivil coping behaviors, arises when an individual's identity is challenged. His ideas are based upon identity theory. Identity theory is a comprehensive model that draws upon symbolic interaction theory to explain and predict human behavior. According to identity theory, individuals possess multiple identities/roles with unique meanings. Individuals work to maintain their identities and gather external feedback to confirm their identities. Most of the time, this process of identity confirmation works at a subconscious level. When external inputs fail to confirm a person's identity, the person will experience stress. Stress serves to draw one's attention and energies to issues important to the individual. At times, those experiencing stress, because of identity threat, cope with stress via uncivil actions. Coping is possible because uncivil and coercive behaviors can defend, preserve, and restore threatened identities (Tedeschi & Felson, 1994). For instance, researchers have shown that the act of taking revenge can restore an individual's damaged self-worth by restoring his or her favorable self-identity (Kim & Smith, 1993; Tjosvold, 1983).

Little research has been conducted to investigate the relationship between identity challenge and the incivility that exists in nursing education. Of note, however, Kang et. al (2018) conducted a grounded theory study to investigate incivility in nursing education. They concluded that those suffering uncivil actions live through a process that threatens their identities and leads

to role conflict.

## **Research Question and Hypotheses**

The purpose of this research was to investigate and measure archetypal nursing faculty identities. To do this, I investigated how well themes and factors identified by previous researchers as relevant to nursing identity, captured and described archetypal nursing faculty identities. I explored the efficacy of these items and factors in capturing the archetypal identities of nursing faculty by collecting survey data. Understanding the factors that capture nursing faculty archetypal identities may allow administrators and faculty to promote civility by creating environments that recognize the importance of these factors and thereby mitigate identity threat.

### ***Research Questions***

The following research questions guided this study.

- What factors capture nursing faculty archetypal identity, nursing student archetypal identity, practicing nurse identity, and physician identity?
- Do the perceived archetypal identities of nursing faculty differ from the archetypal identities of nursing student, practicing nurses, and/or physician and if so how?
- Do the items captured in the factors describing archetypal identities for nursing faculty, nursing student, practicing nurse, and physician vary based on the respondent's age, employment status (full-time vs. part-time), gender, level of program (associates, bachelors, masters, doctoral), race, and years of teaching experience?

### ***Research Hypotheses***

H1: Data from the survey items concerning nursing faculty, nursing student, practicing nurse, and physician will generate factors that described archetypal identities for each role.

H2: Factors describing nursing faculty and practicing nurse archetypal identities will be

identical. Factors describing nursing student and physician archetypal identities will differ from each other as well as from the factors describing nursing faculty and practicing nurse archetypal identities.

H3: Items generating the factors describing nursing faculty archetypal identity, nursing student archetypal identity, practicing nurse archetypal identity and physician archetypal identity will not vary based on the respondent's age, employment status, gender, level of program, race, or years of teaching experience.

### **Abbreviated Methodology**

I implemented a quantitative research tool in a descriptive research design to investigate the archetypal identity of nursing faculty (Nardi, 2014). Specifically, I deployed a Likert-scale, quantitative survey tool patterned after the Burke-Tully methodology to identify items that nursing faculty perceive meaningful to the archetypal identities of nursing faculty, nursing student, practicing nurse, and physician (Burke & Stets, 2009). All registered nursing faculty teaching in institutions of higher education located in the Mountain States of the United States received opportunities to respond to the survey. I analyzed survey data using descriptive statistics, analysis of variance (ANOVA), and exploratory factory analysis (EFA) to determine which factors captured meaningful information about archetypal identities.

### **Significance of the Study**

The Joint Commission, a not-for-profit organization that accredits over 21,000 health care organizations and programs, addressed the problems created by uncivil behaviors in health care settings in its 2008 Sentinel Event Alert (2008). The Commission recognized research indicating that uncivil behaviors contribute to medical errors, poor patient satisfaction, adverse outcomes, increased cost of care, and turnover in qualified clinicians, administrators and



managers. Because of the negative effect of uncivil behaviors, the Commission added new leadership standards that include “Leaders create and implement a process for managing disruptive and inappropriate behaviors” (Joint Commission, 2008, p. 2). In 2016, the Joint Commission updated its Sentinel Event Alert stating that the behaviors identified in its initial alert continue to create problems in health care and that the suggested interventions in the alert remain relevant.

Across all organizations in the United States, the cost of incivility annually is about \$300 billion (Clark, 2013). In addition to the fiscal losses, researchers have shown incivility to negatively impact faculty moral, faculty retention, student retention, faculty physical and emotional wellbeing, student physical and emotional wellbeing, and student performance in nursing education (Clark & Springer, 2007b; Luparell, 2004; Luparell, 2007; Marchiondo et al., 2010; Weber Shandwick, 2011). This study is timely and significant because it applies identity theory and oppression theory as models to interpret and understand incivility, thereby, providing insights to allow administrators and faculty to address incivility.

### **Assumptions/Limitations/Delimitations/Biases**

#### ***Assumptions***

In conducting this research, I assumed that nursing faculty possess and have knowledge of an archetypal nursing identity. I also assumed that nursing faculty involved in the survey answered questions honestly and candidly and that the survey respondents were actually nursing faculty. The nature of the online survey requires respondents to be literate and familiar with online tools, which I assumed to be true for nursing faculty (Nardi, 2014). In forming the survey tool, I assumed that the dimensions expressed within nurse educators’ artifacts and by the pilot group of nursing faculty represented dimensions found meaningful to nurse educators throughout

the Mountain States in describing the identity of nursing faculty. Analysis of survey data via exploratory factor analysis (EFA) assumes a homogeneous samples size of over 200. Analyzed items should be metric and collected data should not have outliers (“Exploratory Factor Analysis,” n.d.).

### ***Limitations***

- The number of nursing faculty that respond to the quantitative survey.
- The accuracy of research tools developed from nursing artifacts and pilot projects.

### ***Delimitations***

- The use of institutions of higher learning in the Mountain West United States.
- The use of nursing faculty who are willing to participate in the study.
- The use of an online quantitative survey.
- The use of dimensions found in nursing artifacts and during pilot projects.

### ***Biases***

As an Instructional Dean who oversees an Associate Degree Nursing Program, I am biased concerning the items I believe best represent the archetypal nursing faculty identity due to my interactions with nursing faculty. Utilizing the Burk-Tully methodology helped control for these potential biases because nursing faculty and nursing artifacts assisted in developing the survey tool; the survey itself allowed respondents to disregard items they judge to be poor descriptors of the archetypal nursing faculty identity while selecting items that best describe the identity.

My conclusions and results may be inaccurate if respondents provided answers that cast them (as nursing faculty) in a positive light instead of proffering accurate data that may create a negative image of them and their profession. The desire to appear favorable to others and avoid

embarrassment can lead to systematic error in self-reported data (Fisher, 1993). I avoided this social desirability bias by utilizing indirect questions. I, therefore, asked respondents to provide information on the archetypal nursing identity in general and thereby avoid direct, personal questions concerning a faculty's own identity. Fisher (1993) has shown indirect questions effective at minimizing social desirability bias.

## **Definitions**

*Archetypal Identity* - the common, general identity recognized by a core group for a specific role.

*Bullying* - "Bullying is repetitive aggressive behavior with an imbalance of power" (Smith 2016, p. 519).

*Horizontal hostility* - A multitude of antagonistic interactions occurring between persons at the same hierarchal level within an organization. Typical interactions used in horizontal hostility include divisive behaviors such as infighting, backbiting, and off putting (Alspach, 2007).

*Horizontal violence* - "Sabotage directed at coworkers who are on the same level within an organization's hierarchy" (Dunn, 2003, p. 977).

*Identity* - "An identity is the set of meanings that define who one is when one is an occupant of a particular role in society, a member of a particular group, or claims particular characteristics that identify him or her as a unique person" (Burke & Stets, 2009, p. 3). "Identities are internalized role expectations" (Stryker & Burke, 2000, p. 5).

*Identity theory* - a theory that explains how social structures impact self-identity and how self-identity impacts social behaviors. In doing this, identity theory not only focuses on how social structures impact self-identity and vice-a-versa, but also addresses internal processes and external behaviors involved in identity formation and validation (Stryker & Burke, 2000).

*Identity relevant experience* - an experience "...that threatens or, alternatively, enhances an

identity that an individual values highly” (Thoits, 1991, p. 101).

*Incivility* - Workplace incivility consists of low-intensity behavior that violates workplace norms while maintaining ambiguous intent to harm a target. “Uncivil behaviors are characteristically rude and discourteous, displaying a lack of regard for others” (Andersson & Pearson, 1999, p. 457).

*Incivility Spiral* - a pattern of behavior in which incivility experienced by a party prompts retaliatory incivility which in turn prompts retaliation and so on. The exchange of uncivil behaviors between parties establishes and reinforces a pattern of uncivil exchanges into the future (Andersson & Pearson, 1999).

*Microaggression* – Benign and unconscious forms of racism, sexism, and heterosexism (Sue, 2010).

*Social Interaction Theory* - theory developed by Mead (1934) which posits that people act toward things according to the meanings attached to the things.

*Social roles* - “Social roles are expectations attached to positions occupied in networks of relationships” (Stryker & Burke, 2000, p. 5).

*Symbolic Interactionism* - a social-psychological approach that utilizes the interpretation and meaning of symbols to gain understanding of human behavior (Patton, 1990).

*Verbal Abuse* - “...perception of being professionally and personally attacked, devalued or humiliated via the spoken word” (Boyle & Wallis 2016, p. 3).

*Workplace aggression* - “a general term encompassing all forms of behavior by which individuals attempt to harm others at work or their organizations” (Neuman & Baron, 1998, p. 393).

*Workplace harassment* - “Any repeated words or actions, or pattern of behaviors, against a

worker or group of workers in the workplace that are unwelcome” (Bartholomew, 2006, p. 7).

*Workplace violence* - direct physical attacks perpetrated by individuals upon their coworkers and/or their employers (Neuman & Baron, 1998).

## **Chapter II**

### **Literature Review**

#### **Introduction**

There is little research investigating the professional identities of nursing faculty; there is, however, extensive research investigating many other identities through the lens of identity theory. Additionally, there is substantial research dealing with incivility, both in nursing health care and nursing education. My literature review, therefore, presents an overview of both the research dealing with identity theory and research dealing with incivility in nursing education and nursing practice. I also elucidate identity theory and oppression theory and explain how these theories serve as lenses through which I conducted my research.

#### **Civility and Incivility**

Many have studied inappropriate behavior in the workplace. Researchers have described, analyzed, and modeled aggression, violence, harassment, physical abuse, tyrannical behavior, atypical behavior, antisocial behavior, and incivility (Baron & Neuman, 1996; Kinney, 1995). A tremendous range of actions fall within the behaviors listed above and it falls to researchers to define and categorize these actions and behaviors. Unfortunately, confusion arises, as researchers do not agree upon standard definitions or set of terms to describe inappropriate workplace behaviors. Those interested in inappropriate workplace behaviors utilize terms such as interactive workplace trauma, relational aggression, horizontal hostility, bullying, incivility, verbal abuse, horizontal violence, lateral violence, and mobbing (Bartholomew, 2006).

Researchers and authors provide a broad spectrum of definitions for incivility in the current literature. Some define incivility as minor lapses in social etiquette, while others describe incivility as major violations of moral and professional ethics. Still others have simply defined

incivility as the lack of civility (Andersson & Pearson, 1999). However, such a definition requires one to first adopt a definition for civility.

Sistare (2004) defines civility as the act of listening, discussion and tolerating different points of view while avoiding violence, personal attacks and acrimony. Guinness (2008) takes a similar view by defining civility as the state in which an individual has respect for differences and can discuss differences robustly while treating people with respect, dignity and honor. Emry and Holmes (2005) define civility as acting with respect for others while honoring differences and at the same time seeking common ground. Using a concept analysis study, Clark and Carnosso (2008) define civility as a state that requires authentic respect between people as demonstrated by time, presence, engagement and intention to find common ground during encounters.

Andersson and Pearson (1999) define civil behavior by stating, “Civil behavior involves treating others with dignity, acting with regard to others’ feelings, and preserving the social norms for mutual respect” (p. 454). Civility in the workplace therefore includes, “modest trivial behaviors that do not often invite public scrutiny or official documentation” (Andersson & Pearson, 1999, p. 454). Unlike some of the other definitions, this definition allows for varying expectations in the context of culture and location. One can easily imagine situations in which civil behavior in one culture could be interpreted as uncivil in a different setting. Because of this, social norms must be addressed to better elucidate the nature of civility.

The antithesis of Andersson’s and Pearson’s (1999) definition of civility, therefore, becomes an excellent working definition for incivility. Incivility occurs when individuals act “...rudely or discourteously, without regard for others, in violation of norms for respect in social interactions” (Andersson & Pearson, 1999, p. 455). Andersson and Pearson (1999) continue to

clarify incivility by claiming that a distinguishing characteristic of incivility is an ambiguous intent to cause harm. In other words, when viewed by the target or observers of uncivil acts, the perpetrator's intent to cause harm through incivility is unclear. Such ambiguity allows those acting uncivilly to easily deny any intent to cause harm. This deniability is not available to those behaving in overtly aggressive manners.

Combining all of these factors into a concise statement provides a definition of workplace incivility. Workplace incivility consists of low-intensity behavior that violates workplace norms while maintaining ambiguous intent to harm a target. "Uncivil behaviors are characteristically rude and discourteous, displaying a lack of regard for others" (Andersson & Pearson, 1999, p. 457).

Other authors have proposed definitions for incivility. For example, Clark (2009) proposes that incivility is "Rude or disruptive behaviors which often result in psychological or physiological distress for the people involved - and if left unaddressed, may progress into threatening situations" (p. 194). Clark and Springer (2010) define incivility in the educational setting as "...disruptive behavior that substantially or repeatedly interferes with teaching and learning" (p. 319). Feldmann (2001) designates academic incivility as "any action that interferes with a harmonious and cooperative learning atmosphere in the classroom" (p. 137). Yet the problem with these definitions lie in their ambiguity; most lack reference to levels of aggression, social norms, and the perpetrator's ambiguous intent to harm.

To complicate matters further, a significant amount of research dealing with microaggressions exists. Some researchers define microaggressions as "...brief, low intensity events that convey negative messages toward marginalized groups" (Ogunyemi et al., 2020, p. 97). This definition of microaggression shares considerable overlap with Andersson's and



Pearson's (1998) definition. However, Sue (2007) in his work on microaggression, coined the term to describe very benign and unconscious forms of racism, sexism, and heterosexism. Consequently, the majority of research dealing with microaggressions in higher education focuses on racial issues (Ogunyemi et al., 2020). Contrastingly, the majority of research dealing with low intensity, inappropriate behavior in nursing and nursing education utilizes the term incivility (Clark, 2013).

Because of the many different takes on incivility by researchers, the term itself describes a broad array of behaviors. For example, Neuman and Barron (1998) define incivility by categorizing it as a descriptor for workforce aggression. Workforce aggression encompasses "...all forms of behavior by which an individual attempts to harm others at work or their organization" (Neuman & Baron, 1998, p. 393). By studying the frequency and prevalence of aggressive actions in the workplace, Neuman & Barron (1998) found 40 unique forms of aggressive behavior. Using factor analysis, the authors found 33 items contained within three overarching dimensions (see Table 1). The three dimensions included (a) expressions of hostility, (b) obstructionism, and (c) overt aggression.

**Table 1***Three-Factor Model of Workplace Agression*

<b>Workplace Aggression Factors</b>	<b>Frequency Ranking</b>
<b>Expressions of Hostility</b>	
Talking behind the target's back/spreading rumors	1
Interrupting others when they are speaking/working	2
Flaunting status/acting in a condescending manner	3
Belittling someone's opinions to others	4
Giving someone the silent treatment	6
Verbal sexual harassment	7
Staring, dirty looks, or other negative eye-contact	8
Intentionally damning with faint praise	9
Leaving the work area when the target enters	11
Failing to deny false rumors about the target	12
Negative or obscene gestures toward the target	14
Holding target, or this person's work, up to ridicule	17
Sending unfairly negative info to higher levels in company	19
Delivering unfair/negative performance appraisals	21
Failing to object to false accusations about the target	22
<b>Obstructionism</b>	
Failure to return phone calls or respond to memos	5
Showing up late for meetings run by target	10
Failing to defend target's plans to others	15

Causing others to delay action on important matters	16
Needlessly consuming resources needed by the target	18
Intentional work slowdowns	20
Interfering with or blocking the target's work	23
Failing to warn the target of impending danger	24
Direct refusal to provide needed resources or equipment	25
<b>Overt Aggression</b>	
Theft/destruction of personal property belonging to target	26
Threats of physical violence	27
Steals/removes company property needed by target	28
Failing to protect target's welfare or safety	29
Damaging/sabotaging company property needed by target	30
Physical attack/assault (e.g. pushing, shoving, hitting)	31
Destroying mail or messages needed by the target	32
Attack with weapon	33

The majority of the 33 actions categorized by Neuman & Barron (1998), especially those categorized as *Expressions of Hostility* and *Obstructionism*, fall under the definition of incivility created by Andersson and Pearson (1999). Most of these actions are low intensity, violations of workplace/social norms that can easily carry ambiguous intent to cause harm. In contrast, the actions categorized as *Overt Aggression* fail to meet Andersson and Pearson's (1998) definition; although they violate workplace/social norms, these actions are of greater intensity and clearly intend to inflict harm upon the target.

Data concerning uncivil behaviors in the work place, such as those listed in Table 1 under *Expressions of Hostility* and *Obstructionism*, are limited and not tracked as closely as data concerning more overtly aggressive actions, yet uncivil behaviors are ubiquitous and frequent in human organizations. Contrastingly, *Overt Aggressive* behaviors, despite better coverage in research and media, are much rarer, especially in the workplace (Neuman & Baron, 1998). Barron and Neuman (1996) found that passive aggressive behavior was significantly more prevalent than overtly aggressive behavior in workplace settings. Despite their low intensity, researchers have shown that chronic expression of incivility negatively impact people and organizations (Kinney & Johnson, 1993). Coworkers suffer as targets of incivility as the bulk of uncivil behaviors focus on coworkers rather than supervisors and subordinates (Neuman & Baron, 1998). Additionally, researchers have found that uncivil behaviors, because of their indirect and covert nature, result in more extensive emotional trauma and stress than outright physical abuse (Mayhew et al., 2004). This is most likely because the majority of human communication is nonverbal and stress is heightened in ambiguous situations, therefore, uncivil behaviors have the biggest impact (often being nonverbal and ambiguous) (Bartholomew, 2006).

Clark (2013), similar to Neuman and Barron (1998), recognizes that uncivil behaviors are varied and may be organized in different dimensions. Clark (2013) however, organizes uncivil behaviors in the dimension of risk and disruption. Using Clark's Continuum of Incivility (Figure 1), actions (and inactions) may be classified as low risk to high risk and as disruptive to threatening.

**Figure 1**

*Continuum of Incivility*



*Note.* Continuum of incivility classifying behaviors according to risk and threat levels. Adapted from *Creating & sustaining civility in nursing education* (p. 14), by C. M. Clark, 2013, Indianapolis, IN: Sigma Theta Tau Intl. Copyright 2013 by Clark; Reprinted with permission.

### **Incivility in the Workplace**

Weber Shandwick, a public relations firm, and KRC Research have been surveying the American people concerning perceptions of incivility since 2010. With each yearly survey, the majority of respondents have reported that incivility is a major problem for the country. In 2016, 95% of Americans surveyed reported that incivility was a problem in America. Seventy-four percent of respondents indicated that incidents of incivility had increased over the past few years while 70% said incivility had reached crisis levels (Weber Shandwick, 2016). These numbers have remained relatively stable since 2010 except for incivility's rise to levels of "crisis;" in 2017, 75% of respondents reported that incivility was at crisis levels (Weber Shandwick, 2017). While in 2018, 93% of respondents reported a severe deficit in civility in America (Weber Shandwick, 2018).

In the 2011 survey, 43% of Americans reported having experienced incivility at work while 38% expressed the belief that the workplace was becoming increasingly uncivil. Interestingly, when asked who/what is to blame for workplace incivility, 65% of respondents indicated that workplace leadership was responsible, while 59% indicated the employees themselves are responsible (Weber Shandwick, 2011).

Data from 2012 demonstrated that the public perceived increasing levels of incivility in education as schools received a 62% incivility rating (up from 40%) while workplace dropped to a 31% incivility rating (down from 40%) (Weber Shandwick, 2012). In 2013, 26% of Americans surveyed reported that they had to quit a job because of incivility in the workplace (Weber Shandwick, 2013). 2014's survey showed seven in 10 Americans felt that society does not do enough to punish those who act uncivilly (Weber Shandwick, 2014).

Data from 2017 demonstrated that issues with incivility continue in the workplace. According to the Workplace Bullying Institute (2017), 19% of employees are bullied while another 19% witness the bullying. Sixty-two percent of workers are aware of abusive conduct in the workplace, while in America 60 million workers are affected by abusive conduct. It is believed that 40% of those targeted by bullying suffer adverse health effects while 65% of those bullied quit their job to stop the bullying.

In 2018, Weber Shandwick (2018) found that the frequency of uncivil encounters continued to rise. In 2016, Americans reported experiencing an average of 6.2 uncivil encounters each week (Weber Shandwick, 2018). Contrastingly, Americans reported experiencing an average of 10.6 uncivil encounters each week in 2018 (Weber Shandwick, 2018). Moreover, in 2018, 84% of Americans experienced incivility at one time or another and the most common settings for uncivil interactions are: (a) shopping (39%), (b) driving (39%), and (c) on social

media (38%) (Weber Shandwick, 2018).

The industries most prone to incivility are healthcare, education, and government (Workplace Bully Institute, 2013). Surveys support this conclusion; in a 2010 survey, respondents were asked to report perceived levels of incivility in different types of organizations. Leading as the most uncivil type of organization was government/politics with a 72% incivility rating. College/University campuses received a 40% incivility rating which mirrored the 40% incivility rating reported for companies/places of employment (Weber Shandwick, 2010). A 2018 survey of Americas indicated among industries, the Healthcare/Pharma/Bio-Tech ranks as the most uncivil (Weber Shandwick, 2018).

When it comes to the healthcare industry and the profession of nursing, an impressive array of research exists dealing specifically with the presence of incivility, the effects of incivility, and mitigation strategies for incivility (Bartholomew, 2006; Clark, 2013). Studies have demonstrated that one in three nurses planned to leave their position because of hostility (McMillan, 1995). Surveyed nurses reported higher job stress, greater anxiety and depression, and lower job satisfaction because of incivility in the workplace. Thirty percent of respondents reported suffering uncivil actions on a daily or near daily basis while mistreatment at the hands of fellow nurses represented 41% of the uncivil events (Farrell, 1999; Gilmour & Hamlin, 2003). Purpora et al. (2012) found that 27-31% of working nurses reported experiencing some form of incivility. Manderino and Berkey (1997) reported that 90-97% of nurses experience verbal abuse from physicians, while 45% of new-to-practice nurses reported suffering uncivil actions leading to feelings of humiliation (McKenna et al., 2003). Forty-seven percent of nurses decrease their time at work, 38% decrease the quality of their work, 80% waste time worrying about uncivil incidences, 63% lose time while trying to avoid an uncivil peer, and 66% report an overall

decline in their performance all because of incivility in the workplace (Pearson & Porath, 2009). Collectively, the ramifications of incivility can cost a single institution an estimated \$30,000 - \$100,000 per each individual coping with incivility per year (Becher & Visovsky, 2012). The fiscal costs of incivility in the United States alone is estimated at \$300 billion (Clark, 2013).

Considering the plethora of research dealing with the nursing profession and incivility, one can easily understand why the expression “nurses eat their young” has been used to describe nursing culture for a long time (Bartholomew, 2006). Despite personally acknowledging this negative axiom, individuals involved in the nursing profession are reluctant to publicly admit its truth. Reluctance to address such a negative culture is understandable in a profession that has its fundamental roots in caring and healing (Bartholomew, 2006).

Because of the nurturing culture of nursing, most nurses do not perceive the harm that they cause when engaging in uncivil behaviors (Bartholomew, 2006). In a study of 227 nurses, over one-third reported that they had acted uncivilly at work yet only expressed disappointment in their behaviors when asked to reflect on the reasons behind their negative behaviors (Walrafen et al., 2012).

When interviewing nursing professionals across the United States, Bartholomew (2006) found two common themes threaded throughout the stories of incivility. First, no matter how long ago the troubling incidents had occurred and often despite leaving the troubled work environment, all nurses feared retaliation and therefore pressed for anonymity as they retold their experiences. The workplace was viewed as dangerous and the nurses felt vulnerable. Second, no matter the situation, nurses suffered emotional pain as they related their stories and had difficulty facing the pain that accompanied feelings of loss and betrayal. The courage required to relate their stories was obvious to the researcher. It is easy to see why nurses report that the most



difficult type of incivility to deal with is nurse-to-nurse incivility (Farrell, 1999). Because of this difficulty, many nurses often choose to avoid speaking up when they witness incivility and therefore become “silent witnesses.” The choice to remain silent is driven in a large part by the fear of redirecting incivility toward oneself. Unfortunately, “silent witnesses” only help to promote the acceptance of incivility as normal (Bartholomew, 2006).

### **Incivility in Education**

Researchers have investigated incivility in education over the last three decades. Studies conducted during this time have focused on defining incivility, investigating incivility’s effects on organizations and people, elucidating factors that cause and promote incivility, and strategies to deal with incivility (Amada, 1994; Bartlett et al., 2008; Bjorklund & Rehling, 2009; Boice, 1996; Heinemann, 1996; Knepp, 2012; S. Luparell, 2004; Masuch, 1985; Morrisette, 2001; M. C. Roberts, 1985).

During the late twentieth century, researchers began investigating the prevalence of incivility in education. Björkqvist et al. (1994) investigated workplace aggression as experienced by university employees. By surveying over 300 faculty, staff, and administrators at universities, Björkqvist et al. (1994) documented that 32% of the respondents reported that they had witnessed fellow employees being subjected to uncivil behaviors such as being insulted, suffering insinuating glances, negative gestures, undue criticism, and unfairly damaging performance evaluations. Almost 30% of the men surveyed reported that they experienced workplace aggression (including uncivil behaviors) while 65% of the women surveyed reported having suffered workplace aggression. The study looked at experience based on teaching, research, administration, economy and service.

Boice (1996), around the same time as Björkqvist's, et al. (1994) work, completed a five-year ethnographic study devoted to determining what type of classroom incivilities are the most problematic in a large research university. Additionally, he investigated what instructor characteristics, behaviors, and actions correlated to high levels of classroom incivility. Boice found the most problematic uncivil behaviors in the classroom to be:

- Teachers displaying aloof and distancing mannerisms.
- Teachers lecturing too quickly for students to engage in the content.
- Students being noisy and not paying attention to the teacher.
- Students arriving late and leaving class early.
- Students offering sarcastic remarks and gestures during class.

He also found that low levels of immediacy, the extent to which an instructor provides signals of warmth, friendliness and affection both verbally and nonverbally, correlated with high levels of classroom incivility. Moreover, with continual exposure to classroom incivility, students became less motivated and more combative, thereby making instruction an increasingly difficult task; students exposed to uncivil classrooms held instructors responsible for not addressing the sources of the incivility (Boice, 1996).

When it comes to how faculty deal with uncivil students, Amada (1994) found that faculty fail to deal with or report uncivil student behavior because faculty (a) hope that avoiding the negative emotions created by confronting the uncivil student would allow for spontaneous resolution; (b) believe that they would not receive administrative support; (c) felt others would see them as incompetent and unable to manage their classroom; (d) felt that students were too emotionally fragile to positively handle reprimand; (e) feared student reprisal.

At the turn of the 21<sup>st</sup> century, researchers began to investigate incivility in the realm of nursing education. In order to determine the extent to which certain uncivil student behaviors exist in schools of nursing, Lashley and de Meneses (2001) surveyed 611 nursing programs. Over half of the respondents reported issues with inappropriate student behavior; almost 25% of the respondents reported objectionable physical contact between students and instructors, while nearly 43% reported verbal abuse directed from student to instructor in clinical settings (Lashley & de Meneses, 2001).

Luparell (2003) investigated the effect of uncivil student behaviors on nursing faculty and documented that student incivility creates fear and panic for faculty. Faculty, therefore, suffer from short-term and long-term stress related effects. Conversely, Thomas (2003) studying nursing students' perception of incivility, found that students believe that nursing faculty contribute to academic incivility by demonstrating unfairness, rigidity, insistence on conformity, and overt discrimination. Additionally, incivility disrupts the student-faculty relationship, creates problematic learning environments, and increases stress among faculty and students.

Clark and Springer (2007a, 2007b) studied the perceptions of faculty and students concerning incivility in nursing education and found that both groups viewed incivility as a moderate to serious problem. Additionally, faculty and students reported that stress, disrespect, faculty arrogance, and student entitlement contributed to uncivil behaviors in nursing education. Clark (2008a; 2008b) further investigated the etiology of incivility in nursing education and found incivility often resulted from psychological and physiological stress in both faculty and students. Students reported that high levels of stress from being overworked and overextended lead to their uncivil behaviors while faculty reported that stress do to burnout from demanding workloads, high faculty turnover rates, competing demands, and exposure to incivility lead to

their uncivil behaviors.

Altmiller (2012) explored the perspectives of undergraduate nursing students on incivility and compared those to the perspectives of nursing faculty. His research demonstrated that nursing students and nursing faculty share common views concerning what behaviors are uncivil. Specifically, students and instructors define incivility similarly, agree on its existence, and its increasing frequency in the academic setting.

A nation-wide survey sampling 588 nursing faculty from 40 states in the United States supported earlier research by demonstrating that nursing faculty perceive faculty-to-faculty incivility as a moderate to serious problem. Surveyed faculty identified uncivil actions as setting a coworker up for failure, rude remarks or put-downs, resisting change, not completing one's share of the workload, using media devices to distract others during meetings, and refusing to communicate on work issues. Faculty also identified stress and demanding workloads as two of the most common factors leading to faculty-to-faculty incivility. Nursing faculty felt that lack of administrative support, unclear policies, and fear of retaliation inhibited their ability to address uncivil behaviors (Clark et al., 2013).

Goldberg et al. (2013) conducted a phenomenological study to investigate the perceptions of nursing faculty who have experienced social bullying (incivility) in nursing academia. Researchers found that the most frequently identified subthemes of "Bullying Tactics/Tricks of the Trade" included withholding information, gossiping, silencing, isolating, acting covertly, lying and manipulating, physical bullying behaviors, sabotaging, creating lack of trust, creating unrealistic workloads, and personal slandering. Subthemes of "Psychological Responses" included humiliation, depression and going to therapy, alienation, over functioning and over vigilance, trapped, fearful and defenseless, self-blame, and overcompensating to avoid bullying.

Subthemes of “Bully Culture” included academic bully culture, lack of teamwork/no collegiality, authority/totally authoritarian, mobbing/cliques, old guard versus new faculty, inconsistent chain of command, impotence/ineffectiveness of human resources, and confronting the bully culture.

Subthemes of “Fighting-Back Strategies” included leaving academia, identifying supports, using documentation, staying invisible, participating in outside professional activities, reframing so not to blame oneself, holding your ground, healing oneself/resiliency, and building a future.

Amos (2013) investigated the perceived levels of incivility among nursing faculty employed at community colleges in North Carolina. Using a descriptive, quantitative study, Amos (2013) found that incivility existed among community college faculty and that nursing faculty described incivility in accordance with Bandura’s and Walters’s (1977) social learning theory and Andersson and Pearson’s (1999) incivility spiral. Additionally, Amos (2013) found that the only demographic factors that correlated with uncivil behaviors were: full-time employment, salary range, ethnicity, and number of years of full-time teaching. Full-time instructors perceived higher levels of incivility than part-time instructors did. Instructors with the lowest yearly income along with instructors in the highest salary range reported lower levels of incivility. Instructors who identified themselves as Asian-Pacific Islander, Hispanic, Native American and Other perceived higher levels of incivility than African-American or Caucasian instructors did. Finally, those instructors with less than two years of full-time teaching experience perceived lower levels of incivility (Amos, 2013).

Clark et al. (2020) conducted a mixed methods study surveying 2,200 nursing programs in the United States to examine nursing faculty and educational administrators’ perceptions of civility and incivility specifically in nursing education. Their data demonstrated that half of respondents found incivility in nursing education to be a moderate to serious problem. In

addition, Clark et al. (2020), documented types of behaviors considered uncivil, perceived frequencies of these behaviors, factors contributing to incivility and strategies to address incivility.

In 2011, researchers began presenting methods and models to alleviate incivility within nursing education. For example, Clark (2011) documented the efficacy of a workshop-based intervention to help improve civility within one nursing program. Shanta and Eliason (2013) suggested that nursing programs apply an empowerment model to improve civility in nursing education. The empowerment model focused on using communication, collegiality, autonomy and accountability as components to promote civility. Burger et al. (2014) offered the bioethical theory of symphonology as a frame to narrate and reflect on uncivil interactions within nursing education. Similar to Burger et al. (2014), Wright and Hill (2015) investigated faculty-to-faculty incivility in nursing education and the consequences of uncivil behaviors; they suggested strategies to combat incivility that were grounded in a theoretical framework of empowerment. Casale (2017) documented the inverse relationship between faculty-to-faculty incivility and the amount of resonant supervisory behaviors based upon Resonant Leadership Theory. Fischer (2017) suggested that leadership and faculty should use transformational leadership as a guiding frame for nursing education. Ziefle (2018) conducted a study to frame incivility in the lens of generational difference, specifically looking at differences in perceived incivility between faculty of the “baby boomer” generation and faculty of generation “X.” Ziefle found that Generation X reported more uncivil interactions than the Baby Boomer Generation and attributed the difference to classroom management ability, culture differences, values, and power differentials (Ziefle, 2018).

More recently, researchers have started investigating the occurrence of incivility, the perception of incivility, and the effects of incivility in nursing educational programs outside of the United States. For example, Eka (2017) conducted a case study looking at incivility in nursing education in Indonesia, while Natarajan et al. (2017) explored perceptions toward incivility in nursing education in the Middle East (Oman). Itzkovich and Dolev (2017) examined the relationship between faculty gender, emotional intelligence and perception of incivility in a nursing program located at a large university in Israel. They found that links between emotional intelligence scores and perceived faculty incivility toward students did not show any gender effect. Kang (2018) conducted a grounded theory study of incivility in clinical nursing education in Korea and found uncivil actions lead to identity challenge and role conflict. Biedermann et al. (2018) conducted a study to describe the bullying and harassment experienced by Australian nursing students while in the clinical setting.

### **The Incivility Spiral**

In order to study incivility, Andersson and Pearson (1999) frame incivility according to the views of social interactionist perspectives. Because of this, Andersson and Pearson perceive incivility as processes involving social interaction; incivility requires parties to interpret and interact. Accordingly, particular constraints and environments that make up the situation affect the processes that drive incivility and the actors involved.

Using this frame, Andersson and Pearson (1999) established a model to elucidate how incivility tends to spiral and escalate within organizations. Spirals or circular patterns often explain phenomena in organizations. For example, scholars have used spirals to explain organizational decline, the adoption of opinions, efficacy and performance relationships, positive emotions in an organization, and personal and organizational resources (Bowen & Blackmon,

2003; Fredrickson, 2003; Hambrick & D'Aveni, 1988; Lindsley, Brass, & Thomas, 1995).

Spiral or circular models in organizations describe patterns of increasing or decreasing, consecutive events driven by human actors. Actors perpetuate the cycle because either they lack understanding of the consequences of their actions or they lack the desire or ability to change their behaviors. Most often, events of incivility spiral toward even more incivility; the pattern amplifies quickly as one party's uncivil behavior leads another party to reciprocate uncivilly and so on (Masuch, 1985).

Uncivil interactions usually generate perceptions of unjust and unfair treatment in victims. Perceptions of unjust treatment, in turn, generate the desire to reciprocate. The most common means of reciprocation is to treat the perceived perpetrator uncivilly, which, can lead to perceptions of injustice and unfairness, thereby perpetuating a cycle of incivility (Bies, 2001; Bies et al., 1997; Skarlicki & Folger, 1997). M. O'Hare and J. O'Hare (2004) describe the cycle as selfish, nonproductive responses that lead to escalating retaliatory behaviors and increasing levels of resentment.

Building on the research of Gouldner (1960), Helm et al. (1972) found that the frequency of reciprocated aggression, such as those characterized as uncivil, is a direct function of the frequency of initial aggression. Additionally, when initial aggression is perceived by the target to be unjust and undeserved, the target employs counter aggression to seek revenge instead of deterrence. Because the counter aggressor seeks revenge, the "punishment" may be more severe than the perceived injustice, thereby leading the recipient of the counter aggression to feel a victim of unjust and undeserved aggression. Thus, the cycle is propagated and increases in intensity and severity (Helm et al., 1972; Youngs, 1986). Tedeschi and Felson (1994) have demonstrated that in a negative environment, such as the incivility spiral, individuals are less



attentive to the demands of civility and less likely to weigh the future costs of incivility.

One may exit the incivility spiral by a) ignoring the perceived identity threat; b) by cognitively reinterpreting the threat; c) by implementing a deescalating action; d) by forgiving the offense (Andersson & Pearson, 1999, Bies et al., 1997). Additionally, certain personal characteristics and social settings can inhibit or facilitate exiting the incivility spiral. Researchers cite impulsiveness, emotional reactivity, and rebelliousness as three personal characteristics that assist in predicting whether an individual will react with uncivil behavior (Andersson & Pearson, 1999).

Social environments also have documented effects on incivility. A formal social environment impedes incivility by establishing an organized, formal climate where there is little ambiguity concerning expected behavior, dress, communication, protocols, etc. Because of this, individuals must pay attention to expectations such as dress, enunciation, and emotional demeanor, which forces the individual to think before acting (Elias, 1982; Morand, 1998). The trappings of formality routinize and control interactions between individuals thereby facilitating an individual's ability to discern between acceptable and unacceptable behaviors (Elias, 1982).

## **Identity Theory**

Self-identity plays an important role in the uncivil and coercive encounters that drive the incivility spiral (Felson & Steadman, 1983). To understand the role identity plays, one must understand how identity drives an individual's behaviors. Stryker's and Burke's identity theory provides the framework necessary to explain the relationships between identity and behavior, and how these two forces affect and influence each other (Stryker & Burke, 2000).

Applying Stryker's and Burke's identity theory allows social scientists to model the interplay between identity and behaviors. Because of this, identity theory is one of the central

models used in this research. Drawing on ideas from symbolic interactionism and perceptual control theory, Burke and Stryker created a theory that elucidates how all identities function (Burke & Stets, 2009). Specifically, identity theory explains how social structures impact self-identity and how self-identity impacts social behaviors. In doing this, identity theory not only focuses on how social structures impact self-identity and vice-a-versa, but also addresses the internal processes of self-verification and the external behaviors involved in identity formation and validation (Stryker & Burke, 2000). However, to grasp identity theory, one must first understand the concept of identity itself.

Contemporary use of the term “identity” varies greatly across many disciplines. In general, however, three relatively distinct usages exist (Stryker & Burke, 2000). Some use identity to refer to the collective culture of a people. Others use identity to refer to common identifications within a social category. Finally, some use identity to describe the meanings a person gives to the many roles he or she plays in society. Researchers draw upon this third definition in order to model the links between identity and behavior (Stryker & Burke, 2000).

One’s self-identity (social face), therefore, is the combination of characteristics (e.g., strong, intelligent, capable) and social identities (e.g., race, gender, job) that one desires to present in select situations (Erez & Earley, 1993). Individuals may possess multiple identities in our highly differentiated society and each identity possess unique meanings that the owner has attached to it (Stryker & Burke, 2000).

The ability to possess multiple identities is central to identity theory. From the frame of identity theory, every person possesses multiple identities within themselves. For example, friend, teacher, parent, child, church member, scholar, and benefactor may exist in the same person. Moreover, these identities interact *within* a single person and *between* different people.

For instance, Jim may be a father and a teacher himself; these identities, therefore, interact *within* Jim. Yet at the same time, Jim's identities of father and teacher can interact *between* Jim and another person who may be a father of one of Jim's students (Burke & Stets, 2009). Identity theory predicts that individuals have as many identities as distinct relationships that they possess; these identities self-organize into a hierarchy of relative importance to the individual. The probability that an identity will be active and influence behavior across multiple situations is known as identity salience (Stryker & Burke, 2000).

Identity theory hypothesizes that the greater the salience of a particular identity, the greater the probability that the individual will choose to act in ways that support and align with the salient identity. Such a hypothesis arises from the fact that identities, in identity theory, become internal, cognitive schema that serve as frameworks for interpreting experience and driving behavior. Identities, therefore, increase one's sensitivity and receptivity to certain behavioral prompts (Stryker & Burke, 2000). People, consequently, do not respond to the environment around them (including the behaviors of others) but instead respond to their perceptions of the environment and associated meanings that the environment has on their identities. Perception and meaning of other's behaviors are arrived at via role taking - imagining oneself in another's position in order to understand and judge the intentions of the person (Burke & Stets, 2009).

Researchers have proposed other theories to describe the phenomenon addressed by identity theory and these theories share many aspects. For example, Jones and McEwen (2000) developed the model of multiple dimensions of identity development (MMDI) to describe how multiple identities develop in a single individual. Similar to identity theory, MMDI proposes that individuals hold multiple identities, that identities interact, and that identities have salience

(Jones & McEwen, 2000). MMPI, however, lacks the quantitative research history that identity theory possesses.

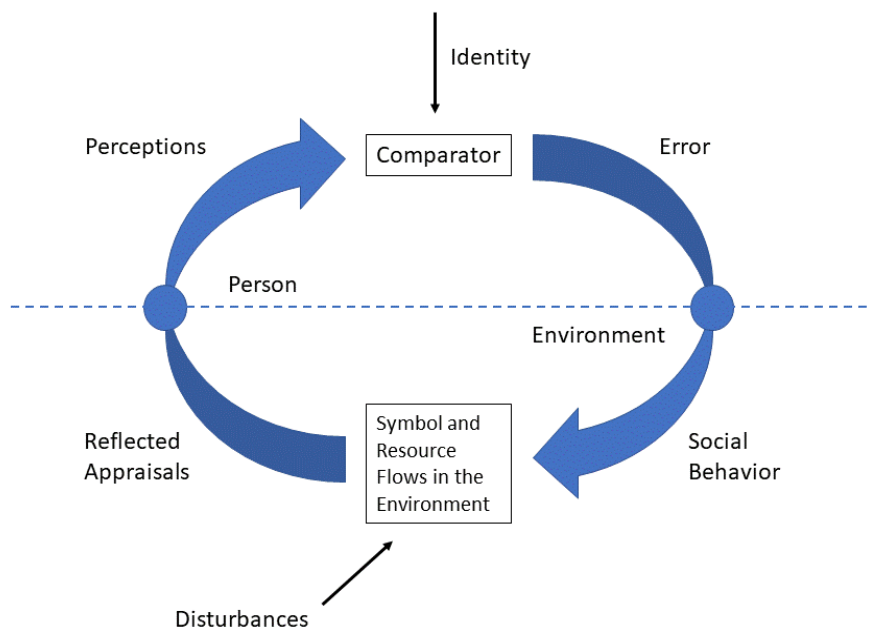
Identity theory traces its origins to the writings of George Herbert Mead (1934). Therein, Mead provides a framework to analyze many sociological and social psychological issues. Mead's framework asserts that society shapes concept of self while self-concept shapes social behavior (Stryker & Burke, 2000). Identity theory has operationalized Mead's formula by asserting that: commitment shapes identity salience while identity salience shapes role behavior. In this specification, commitment is defined as the degree to which an individual's relationships to others depend on possessing and fulfilling a particular identity or role. Commitment may be measured by the costs of losing relationships if the related identity is lost or unsupported. Salience is defined as the probability that an identity will be active and influence behavior across multiple situations. Role behaviors are actions that function to strengthen the individual's perceived identity (Stryker & Burke, 2000). In general terms, identity theory seeks to explain the specific meanings that people hold for the identities that they claim, how these identities relate to each other, how identities influence feelings, emotions, thoughts and behaviors, and how identities connect people to society (Burke & Stets, 2009).

Identity theory is composed of four components (*Figure 2*) (a) the identity standard or the set of meanings that define an individual's identity in a situation, (b) the individual's perceptions of meanings within a situation and corresponding meanings of the identity standard, (c) a mechanism to compare the perceived meanings created in a situation with the meanings of the identity standard, (d) behaviors and thoughts that function to align perceived meanings with identity standards (Burke & Stets, 2009; Stryker & Burke, 2000). These four components may be organized into a negative feedback loop as described in perceptual control theory (Burke,

1991; Burke, & Stets, 2009). A negative feedback loop is a control system that ultimately allows for homeostasis or balance. In general, negative feedback loops describe the relationships between stimuli, sensors, and effectors and how these factors interact to maintain homeostasis in a system. Sensors detect changes (driven by stimuli) in the environment and compare changes to established set points. Set points are optimal states for the system. Often, a system may possess a range of acceptable values instead of a single point. Effectors, accordingly, act to oppose changes that drive the system away from set points. The “negative” adjective in the term negative feedback loop reflects the effectors’ work to oppose disruptions from a set point.

**Figure 2**

*Identity Theory Model*



*Note.* Cyclical components of the identity theory model. Adapted from P. J. Burke and J. E. Stets, 2009. *Identity Theory*, p. 62. Copyright 2009 by Oxford University Press. Reprinted with permission.

Textbooks often cite a heating and cooling system in a home as an example of a negative feedback loop. In a home heating/cooling system, the thermostat represents the sensor while the furnace and the air conditioner represent the effectors. Temperature acts as the stimulus. The homeowner, who sets the desired temperature for the home, establishes the set point. Drawing on this common system, one can see how a negative feedback system works to maintain homeostasis in regard to the temperature of a home. If the set point for temperature is 70 degrees, the system as a whole works to maintain 70 degrees. Any perturbation away from the set point is detected and appropriate effectors respond to minimize the perturbation. For example, if the house begins to cool, the thermostat will detect the lower temperature and signal the furnace to begin to work and the air condition to stop working, thereby raising the temperature in the home. If the temperature exceeds 70 degrees, the thermostat senses the higher temperature and signals the furnace to stop heating and signals the air condition to begin working, thereby lowering the temperature toward the set point (Burke & Stets, 2009).

In identity theory, the negative feedback loop exists to maintain homeostatic perceptions of identity. The individual works as the sensor/comparator and establishes the set point (or range of acceptable values) for the system by choosing and adopting his or her identities and the meanings of the identities (Burke, 1991; Powers, 1973). Stimuli include any input that affects the individual's perceptions of his or her identity. The individual functions as the effector by choosing to act (or not act) in order to influence the system and minimize perturbations to perceived identity. As perceptions are compared with identities, the individual's goal is to match perceptions with identity meanings. Only when perceptions match and align with the identity meanings does the individual succeed at maintaining homeostasis (Burke & Stets, 2009).

Authors note that the process described above usually functions on a subconscious level. If perceived inputs do not align with adopted identities, an “error signal” is generated. The error signal represents the difference between perceptions and identity meanings. For example, Burke and Cast (1997) and Burke and Tully (1977) demonstrated that individuals possess unique gender identities that vary among cultural groups and even vary among individuals within the same culture group. Each individual’s gender identity exists on a continuum from typically masculine to typically feminine and his or her “location” on this continuum functions as a standard that the individual uses to compare with their perceptions. To put in numerical terms, an individual may adopt an identity of “seven” on a scale from one to ten, where “one” represents completely male and “ten” represents completely female. If the individual perceives that he or she is existing at a level of “four,” as a comparator, he or she computes the “error signal” which is the difference between the individual’s identity standard and the input or perceived identity.

In situations where the perceived inputs from the environment do not support an individual’s identity, the error signal communicates to the individual that his or her identity is not being legitimized. These identity relevant experiences cause the individual to experience negative emotions. Negative emotions, in turn, often prompt the individual to employ “mechanisms of legitimation” to cope with the negative feelings (McCall & Simmons, 1978).

McCall and Simmons (1978) identify seven mechanisms of legitimation; these include a) short term credit, b) selective perception, c) selective interpretation, d) blaming others, e) disavowing, f) switching identities, g) withdraw. Employment of these mechanisms allow an individual to cope with negative emotions by bringing perceived inputs into alignment with identity, thereby eliminating any error signal being generated by misalignment.

The process of drawing upon past episodes of successful identity verification to address a current misalignment event is known as drawing on short-term credit. By using the short-term credit strategy, an actor essentially draws upon credit built from previous successful identity verification events to get past a failure in identity verification (Burke & Stets, 2009). For example, a teacher may appeal to his or her history of excellent student evaluations to endure and deal with negative evaluations from a particular student.

Individuals utilize selective perception as a mechanism of legitimization by paying attention to cues that support a chosen identity while ignoring cues that do not support chosen identities (Burke & Stets, 2009). Continuing with the example of the teacher above, selective perception would occur if the teacher ignored negative end-of-course evaluations from students and instead focused on positive nonverbal cues such as smiling, nodding, and relaxed postures generated by students during the class.

Selective interpretation is a mechanism of legitimization closely related to selective perception. Actors employ selective interpretation by incorrectly judging cues as supportive to their identities when the cues do not actually support their identities (Burke & Stets, 2009). For instance, a teacher interpreting a student's negative evaluations as proof of the teacher's prowess (because the best teachers push students out of their comfort zone, hence students are unhappy) is an example of selective interpretation.

Blaming works as a mechanism of legitimization because individuals avoid negative emotions by holding others accountable for not legitimizing the identities in question. When implementing blaming, the actor criticizes and may even sanction others for their lack of support. Therefore, the threatened individual perceives lack of identity verification as a failure of others instead of a personal failure (Burke & Stets, 2009). For example, a teacher who receives negative



teaching evaluations may cope with the negative evaluations by blaming the students for not taking the class seriously or the evaluation process seriously.

Individuals with threatened identities may also cope by disavowing an unsuccessful role performance. Such individuals disavow the event in question by communicating that they did not actual intend what lead to identity misalignment (Burke & Stets, 2009). For example, a teacher (who sees him or herself as engaging and entertaining) may claim that he or she intended to present a different lecture in lieu of the lecture that many students found outdated and boring, because he or she did not have time to prepare the new lecture.

Switching identities occurs when a threatened individual chooses to focus on a non-threatened identity that is easily confirmed instead of dealing with the cognitive dissonance created when focusing on the threatened identity (Burke & Stets, 2009). An example of switching identities would occur if a college instructor facing poor teaching evaluations focused instead on the success of his or her research.

McCall's and Simmons' (1978) final mechanism of legitimization, withdraw, occurs when an individual with a threatened identity simply removes him or herself from the interaction leading to the troubling cues. Other researchers have found additional mechanisms that individuals employ to deal with identity threat. For example, field and laboratory studies corroborate that perceived attacks on identity often lead to anger, retaliatory threats and ultimately physical attacks. Moreover, the perceived severity of harm to identity and the importance of the threatened identity directly correlate to the intensity of an individual's response (Felson, 1982; Felson & Steadman, 1983).

Individuals frequently implement uncivil and coercive behaviors as means to accomplish identity preservation, defense and restoration (Tedeschi & Felson, 1994). For instance,

researchers have shown that the act of taking revenge can restore an individual's damaged self-worth by restoring his or her favorable self-identity (Kim & Smith, 1993; Tjosvold, 1983). Additionally, Birkeland and Nerstad (2016) demonstrated that workplace incivility was positively correlated with and proceeded by obsessive passion for work. Individuals who are obsessively passionate for their work find their work an integral part of their identity. When obsessively passionate people find their identity challenged, uncivil behaviors become coping mechanisms to protect their identity (Birkeland & Nerstad, 2016). Moreover, those with threatened identities often care more about protecting their identities than the repercussions of their self-protecting actions (Tedeschi & Felson, 1994).

Swann and Hill (1982) demonstrated the efficacy of the defensive mechanisms discussed above by showing that individuals experiencing identity threat choose to employ coping mechanisms and subsequently display minimal self-rating changes concerning their identities. Only those denied coping mechanisms produced significant changes to self-ratings. It is interesting to note that the urge to employ defensive mechanisms when one's identity is challenged occurs whether one's self-identity is positive or negative.

### **Oppression Theory**

Theorist Paulo Freire (2005) established oppression theory to elucidate the in-group conflict and hostility that exists among oppressed people. According to Freire's theory, whenever a dominant group of people oppresses a subordinate group, the values and cultures of the subordinate group will be repressed. Moreover, in order to get ahead in an oppressed environment, members of the subordinate group must reject their own culture and values and adopt the culture and values of the dominate group. Rejecting one's own culture and values while adopting the culture and values of one's oppressor leads the oppressed to suffer in a

dualistic state. Dualism requires the oppressed to exist as themselves and the oppressor whose culture and values they have internalized at the same time. Dualism denies the oppressed an authentic existence; chafing under the restrictions and conflict of their dualistic nature, oppressed individuals often engage in horizontal violence against their own peers.

According to oppression theory, oppressed individuals engage in horizontal violence for several reasons. First, when an oppressed individual perpetrates violence against his or her own, he or she essentially becomes the oppressor. “It is a rare peasant who, once ‘promoted’ to overseer, does not become more of a tyrant towards his former comrades than the owner himself” (Freire, 2005, p. 46). In Freire’s example, the promoted peasant must emulate the land owner who promoted him or her in order to maintain his or her position. Second, because the oppressed strive to become oppressors, horizontal violence, although targeting a fellow oppressed individual, may be viewed as an indirect attack upon the oppressors (Freire, 2005). Third, the unconscious goal of peer-to-peer hostility and incivility is to maintain homogeneity. Oppressed groups desire the anonymity of unanimity; similar to the protection fish find in schooling, oppressed groups find psychological safety in homogeneity (Bartholomew, 2006).

Sandra Roberts (1983) first applied Freire’s theory to the nursing profession claiming that nurses display many characteristics congruent with oppressed groups including low self-esteem and feelings of powerlessness and self-hatred. Other researchers have provided evidence supporting Roberts’ postulation that the nursing profession is an oppressed discipline (Bartholomew, 2006; Daiski, 2004; David, 2000; Torres, 1981). Bartholomew (2006) argues that nurses, similar to the colonized Africans, spread incivility throughout their ranks.

The oppression of the nursing profession arose from gender issues (Bartholomew, 2006). Because the profession was founded at a time during which women lacked significant rights and

because the profession was composed predominantly of women, it is easy to understand how the nursing profession filled a subordinate role in a patriarchal society. From this establishment, the nursing profession gained a set of female role expectations that nurses still deal with today.

These expectations include:

- a nurse is called to do “God’s” work as an “angel” of mercy;
- a nurse never gets angry;
- a nurse always cares;
- a nurse selflessly serves others rejecting her own needs for little compensation or reward;
- a nurse never complains;
- a nurse is always subordinate to physicians and speaks only when spoken to

(Bartholomew, 2006; Dargon, 1999; Farrell, 1997; Gordon, 2005; Kanter, 1979; Reverby, 1987).

Despite having the expectations listed above, nursing professionals must adopt the behaviors, expectations, and culture of the oppressive group in order to gain access to resources and power. The oppressive group, in this case physicians, is rooted initially in patriarchy and values intimidation, stoicism, intimidation, independence, focus on finances, logic, closed doors, lack of transparency, and giving orders without input. Nursing professionals that do not adopt the values of the dominant group are denied access to resources and power, and are often labeled as “non-team players” (Bartholomew, 2006).

Social scientists have shown that humans adopt the attitudes and behaviors established by a group in order to gain acceptance from the group. Known as assimilation, this unconscious process helps explain why incivility exists and propagates in the nursing profession (Bartholomew, 2006). For example, Ceravolo et al. (2012) documented the acceptance of

gossiping in a unit of nurses. They explained that nurses, who at first found gossiping troubling, soon gossiped because the frequently observed behavior became normalized. Additional research has demonstrated that nurses normalize and tolerate uncivil behaviors when their supervisor is the source of uncivil actions. The thought process of “If my boss can behave uncivilly, everyone else can as well” justifies the assimilation process (Hutchinson et al., 2010).

In an oppressive environment, both the dominant and subordinate groups may eventually accept the norms established by the dominant group. After a period of time, both groups may not even notice or question these unspoken norms and rules (Roberts, 1983). Such a pattern exists in the modern-day nursing profession where physicians and nurses are unaware of the dominating actions of physicians. When physicians engage in oppressive behaviors such as avoiding direct eye contact with nurses, not learning nurses’ names, and speaking abruptly, they reinforce nurses’ subordinate positions (Bartholomew, 2005).

In reviewing the literature dealing with incivility, one can see a pattern in the history of research. In general, no matter the setting, research has focused on (a) documenting the prevalence of incivilities, often investigating the types, frequencies and perceptions of certain uncivil behaviors; (b) investigating the effects of incivility upon organizations and people; (c) investigating the etiology of incivility and, (d) investigating the effectiveness of proposed interventions to reduce and eliminate incivility. Despite the rich history of research into incivility in the field of nursing, I furthered the research into incivility within the field of nursing education by investigating the efficacy of identity theory and oppression theory in serving as lenses by which one can begin to understand the etiology of incivility in nursing education.

## **Chapter III**

### **Methodology**

#### **Research Design**

The purpose of this quantitative research study was to investigate and describe the archetypal identity held by nursing faculty teaching in post-secondary registered nursing programs located in the Mountain States of the United States. I used a descriptive research design in collecting and analyzing data by employing a quantitative survey. A self-administered, online survey serves well in: (a) measuring items with numerous values or response categories; (b) investigating attitudes and opinions that are not easily observed; (c) describing characteristics of large populations; and (d) providing the anonymity necessary to facilitate candid responses (Nardi, 2014). The quantitative survey captured the items associated with archetypal nursing faculty identity and emulated the Burke-Tully method for identity measurement (Burke & Stets, 2009).

The quantitative survey was based upon the research tradition of symbolic interaction. Symbolic interaction is a social-psychological research orientation/technique that places great emphasis upon how people interpret and give meaning to symbols in order to understand peoples' behaviors. In this tradition, "People create shared meanings through their interactions, and those meanings become their reality" (Patton, 1990, p. 112). By studying meanings and the influence of symbols and shared meanings, researchers are able to determine what is most important to people, why they resist change, and what would facilitate change (Patton, 1990).

Blumer (as cited in Patton, 1990, p. 112), a pioneer of symbolic interaction, articulated three fundamental premises of symbolic interaction:

- Human beings act toward things on the basis of the meanings that the things have for

them.

- The meanings of things arise out of the social interactions one has with one's fellows.
- The meanings of things are handled in and modified through an interpretative process used by the person in dealing with the things he or she encounters.

## **Research Sites**

I surveyed nursing faculty working in registered nursing programs located in the Mountain States of the United States (U.S.). The Mountain States consist of eight states, namely Colorado, Arizona, Utah, Nevada, New Mexico, Idaho, Montana, and Wyoming. The Mountain States region is one of nine geographic divisions designated by the United States Census Bureau (Sen Neg, 2018). The eight Mountain States contain 171 registered nursing educational programs.

The sample size provided reasonable coverage of the population because the sample drew upon nursing instructors from all types of post-secondary institutions (community colleges, colleges, and universities) located in the Mountain States of the U.S. from 171 registered nursing programs.

## **Data Storage and Security**

Data security was established as I stored all collected data on a cloud-based storage system that was password protected and associated with Idaho State University. All quantitative survey data was collected through a Qualtrics XM online survey created on the researcher's graduate student's university account.

Upon completion of this research, I permanently deleted all collected data. ISU's Institutional Review Board approved the procedures of inquiry and data collection implemented in this study in order to certify that this study maintains compliance with the regulations dealing

with research involving human subjects.

## **Quantitative Research**

The first phase of research involved adapting and applying a quantitative tool developed by Burke and Tully (1977) to measure individual identity. Drawing upon symbolic interaction and identity theory, Burke and Tully (1977) first used this tool to measure gender identity in children. Osgood et al. (1957) laid a foundation for the tool developed by Burke and Tully by creating a semantic differential survey methodology. The semantic differential survey methodology consists of sets of paired, bipolar adjectives/descriptors that describe different dimensions of identities. Because of their bipolar nature, these adjective/descriptor sets communicate the ends or extremes of particular dimensions. For example, the meaning to the identity of “father” might be investigated by having people respond to paired adjectives/descriptors such as happy...sad, hard...soft, slow...fast, kind...mean, etc. Each set of paired descriptors are presented at the ends of a Likert Scale and respondents can indicate where their answers fall on the Likert spectrum (Burke & Stets, 2009).

Burke and Tully (1977) patterned their tool on a semantic differential survey to investigate gender identity among children in sixth, seventh, and eighth grades. In order to define role/identity, it is necessary to juxtapose the identity being investigated with counter identities. No identity exists except in relation to counter identities and, in fact, can only be understood in relation to counter-identities. For example, “husband,” does not exist in isolation but relates to the counter identity of “wife” (Lindesmith & Strauss, 1956). In their 1997 study, Burke and Tully juxtaposed “boy” with “girl,” essentially asking children “boys usually are...” and “girls usually are...” The researchers found the dimensions that best differentiated between boy and girl identity, and then tested individuals thereby establishing an overall measurement of how



boy-like or girl-like individuals see themselves.

The Burke Tully Method of identity measurement, as described above, consists of four steps:

1. Selection of counter-identities relevant to the identity being investigated.
2. Selection of appropriate, paired adjectives/descriptors for the survey.
3. Application of discriminant function analysis to determine the descriptors (paired adjectives) that distinguished the juxtaposed identities.
4. Use of meaningful descriptors to measure an individual's self-reported descriptions (Reitzes & Burke, 1980).

Several researchers have subsequently utilized the model developed by Burke and Tully (1977) to measure the meaning of identity in various settings. For example, Burke and Cast (1997) and Stets and Burke (1996) measured the identity of gender in adults along the dimensions of masculine/feminine. Reitzes and Burke (1980) measured the identity of college students finding meaning along the four dimensions of “academic responsibility,” intellectualism,” “sociability,” and “assertiveness.” Mutran and Burke (1979a, 1979b) researched the identity held by older people and found dimensions of “feeling useless” and “personalism” meaningful. Stager and Burke (1982) quantified the body image identity of adolescents while Stets and Burke (2005) looked at spousal identities in newly married couples to distinguish between husbands and wives. Stets and Biga (2003) measured environmental identity along the dimensions of “anthropomorphism” and “ecocentrism.” Finally, Stets and Carter (2011) investigated moral identity using the dimensions of “justice” and “care.”

## **Quantitative Data Collection**

In this study, I adapted and utilized the research tool developed by Burke and Tully (1977) and followed the first three steps of the Burke-Tully method listed above. To adapt the Burke-Tully (1977) research tool, I modified the semantic differential survey format into a traditional Likert scale survey. By so doing, respondents provided feedback on each of the paired descriptors individually. This allowed me to utilize exploratory factor analysis, instead of discriminant function analysis, to investigate the data and provided for the opportunity to employ additional statistical tools. Additionally, requiring respondents to address each descriptor individually allowed me to verify that the data generated by the survey tool was internally consistent (Sullivan & Artino, 2013; Thompson, 2004). For this study, the fourth step of the Burke-Tully (1977) methodology, measuring self-reported descriptors to calculate where an individual's identity falls, was not be conducted as individual identity "scores" were not relevant for the focus of this research.

Step one involved choosing counter identities. Because I am interested in nursing faculty archetypal identity, I chose the counter identities of "nursing student," "practicing nurse," and "physician" to juxtapose with "nursing instructor." By comparing and contrasting survey results, I was able to find differences and similarities in the factors used to describe the four identities listed above.

Step two required the selection of adjectives/descriptors to include in the survey. To accomplish this, I utilized items discovered by researchers who have investigated nursing incivility and oppression. The items included:

- a nurse is called to do "God's" work;
- a nurse never gets angry;
- a nurse always cares;

- a nurse selflessly serves others rejecting her own needs for little compensation or reward;
- a nurse never complains;
- a nurse only speaks when spoken to;
- a nurse is stoic;
- a nurse uses intimidation;
- a nurse avoids seeking assistance/help;
- a nurse focuses on financials;
- a nurse is unseen;
- a nurse gives orders and directives without input;
- a nurse handles advanced technologies and must think critically;

(Bartholomew, 2006; Dargon, 1999; Farrell, 1997; Gordon, 2005; Kanter, 1979; Reverby, 1987).

I used each of these items to develop Likert survey questions. Appendix A demonstrates how each of the items above relates to specific Likert questions and their opposites. Once developed, I had nursing faculty working at the College of Southern Idaho provide feedback concerning the appropriateness of the survey items. Ten full-time Nursing faculty teach in an Associate of Science Nursing (ASN) Program at the College of Southern Idaho. The nursing faculty, from the College of Southern Idaho were not included in the actual study.

To implement the survey, I employed cross-sectional, purposive sampling to survey 2,600 nursing faculty teaching in 171 programs in the Mountain States utilizing an online web-based survey. I deployed the survey using web-based technology because online survey tools yield higher response rates, at a lower cost, and more rapidly than paper surveys (Cobangolu et al., 2001). Additionally, most nursing educators have access to email and online technology

necessary to respond to a web-based survey (Cobangolu et al., 2001). The nursing faculty I surveyed teach in the 171 programs that deliver at least one registered nursing degree from associate's degree to doctoral degree. All nursing faculty teaching in post-secondary registered nursing programs in the Mountain States received multiple emailed invitations to take part in the online survey. The first invitation (Appendix C) was emailed notifying nursing faculty of the opportunity to take a survey investigating nursing faculty professional identities. I sent a second email (Appendix D) invitation reminding the group to participate two weeks after the initial email invitation. A final email invitation (Appendix E) was sent out approximately two weeks after the second email reminding respondents of the opportunity to take part in the research survey. The survey was open for a total of five weeks. The survey protocols I implemented, such as pre-notification for the survey, publicizing the survey, providing ample response opportunities, establishing the importance of the survey, providing survey feedback, and providing prize drawings facilitated high response rates (Cook et al., 2000; Rogelberg & Stanton, 2007).

The actual survey was deployed utilizing Qualtrics XM an online survey tool provided by Idaho State University. Survey results were collected automatically and stored on secure servers maintained by Qualtrics XM. I kept survey data confidential as survey results were password protected. I protected respondent's anonymity by reporting only collective results.

Because my survey generated an adequate sample size for analysis (over 300 respondents), I found it unnecessary to address non-response bias impact by comparing late respondents to early respondents and by implementing active non-response analysis via phone interviews (Baruch & Holtom 2008). Of note, Fosnacht et al. (2017) supported the claim of survey methodologist that low response rates do not necessary bias result. Fosnacht et al. (2017)

demonstrated that estimates generated by samples with low response rates are frequently very similar to estimates generated by samples with high response rates.

### **Quantitative Data Analysis**

By using a Likert scale, survey methodology, responses to the self as an object, may be collected and analyzed. Thus, the researcher has a quantitative tool to measure an individual's identity (Burke & Stets, 2009). Following step three of the Burke-Tully (1977) methodology, I analyzed data collected from the quantitative survey. I chose to use exploratory factor analysis, instead of discriminant function analysis because exploratory factor analysis allowed me to compare and contrast factors between groups while discriminant functional analysis only finds factors that differentiate between groups.

Using exploratory factor analysis, I investigated the latent factors that underlie the surveyed items. Essentially, latent factors assist in explaining relationships among the surveyed items, thereby allowing one to summarize relationships in a more parsimonious manner (Thompson 2004). Using exploratory factor analysis on the surveyed items describing the four naturally occurring groups of (a) nursing faculty, (b) nursing student, (c) practicing nurse, and (d) physician allowed me to contrast and compare latent factors among the groups; in so doing, I captured the unique and shared identity factors among the groups (Thompson 2004).

Once underlying factors were identified, I investigated whether the factors varied according to responses based on (a) age of respondent, (b) full-time vs part-time employment, (c) gender of respondents, (d) level of program in which respondents work, (e) race of respondents, and (f) years of teaching experience.

To maintain the integrity of exploratory factor analysis the following assumptions must be met:

### ***Adequate Sample Size***

Sample size must be large enough to allow for exploratory factor analysis. Despite agreement that sample size is important, researchers recommend different sample size guidelines. For example, Tabachnick and Fidell (2007) recommends a minimum of 300 cases for factor analysis while Hair et al. (1995) recommend that sample sizes exceed 100. Henson and Roberts (2006) argue that when communalities are high (greater than .60) and several items describe each factor, sample sizes may be smaller. Sapias and Zeller (2002) claim that even sample sizes of 50 may be appropriate for factor analysis. By sampling 171 nursing programs, each of which is composed of groups of faculty, I expected a sample size that easily exceed 100.

### ***Adequate Sample to Item Ratios***

Researchers also provided recommendations concerning the ratio of sampled participants to items measured. Similar to sample size, researchers disagree on the appropriate ratios and recommend ratios that range from three participants for each item to 20 participants for each item (Williams et al., 2010). Interestingly, several researchers have tested these guidelines and some note that there is not a minimum ratio of participant to item required to obtain good factor recovery (Hogarty et al., 2006; Williams et al., 2010). I expected my survey to generate adequate numbers to provide a participate-to-item ration that fell within the recommended range.

### ***Factorability of the Correlation Matrix***

Tabachnick and Fedell (2007) recommend evaluating the correlation matrix to verify that correlation between some individual items exceed .30. If no correlations exceed .30, the researchers should reconsider using factor analysis.

### ***Sampling Adequacy and Sphericity***

Prior to extraction of factors, researchers should utilize the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy test to determine if respondent data is suitably for factor analysis. In cases where the participant to item ratio is less than 1:5, a KMO index of 0.50 indicates that the data is adequate for factor analysis. Additionally, the Bartlett's Test of Sphericity should be significant ( $p < .05$ ) to justify factor analysis of the data (Williams et al., 2010).

### **Data Screening**

Of the 2,600 nursing faculty emailed invitations to participate in my survey, 460 respondents took part; this represented a 17.7% response rate. Of the 460 participants, 357 participants completed the entire survey; this represented a 77.6% completion rate. Because several of my research questions required data from all identity categories (nursing faculty, nursing student, practicing nurse, and physician) as well as demographic data, I only included cases with complete data sets for analysis. Dropping incomplete cases also helped to ensure that the data used for analyses came from respondents who took the survey seriously as demonstrated by their effort in completing the entire survey. Additionally, Tabachnick and Fidell (2007) recommend deleting cases with missing values to prevent overestimation during factor analysis.

The resulting sample size of 357 (using listwise deletion) exceeded the recommend threshold of 300 required for factor analysis. Additionally, the ratio of participant to items for this study was 16.2 to 1; This ratio falls within the range of 3 – 20 participant-to-item ratio that is recommended for factor analysis (Williams et al., 2010).

Analysis of the data demonstrated that responses for all identity items in all categories were not normally distributed (Appendices F-I). Kolmogorov-Smirnov and Shapiro-Wilk tests of

normality for all items in all identity categories were significant, indicating non-normal distributions (See Appendices J-M).

Analyzed responses came from faculty that reported demographic data outlined in Tables 2-7.

**Table 2**

*Age of Respondent*

<b>Age Category</b>	<b>N</b>	<b>%</b>
26-30	9	2.5
31-35	19	5.3
36-40	32	9
41-45	33	9.3
46-50	38	10.6
51-55	61	17.1
56-60	61	17.1
61-65	70	19.6
66-70	25	7.0
71-75	7	2.0
Over 75*	2	.06

\*Dropped from ANOVA analyses.

**Table 3**

*Employment Status of Respondents*

<b>Employment Status</b>	<b>N</b>	<b>%</b>
Full-time	54	15.1
Part-time	308	86.3
Not currently employed	0	0.0



**Table 4***Gender of Respondents*

<b>Gender</b>	<b>N</b>	<b>%</b>
Female	311	87.1
Male	42	11.8
Non-binary*	1	0.3
Prefer not to say*	3	0.8

\*Dropped from ANOVA analyses.

**Table 5***Highest Level of Program in which Respondents Teach*

<b>Program Level</b>	<b>N</b>	<b>%</b>
Associate's Degree	137	38.4
Bachelor's Degree	127	35.6
Master's Degree	75	21.0
Doctoral Degree	18	5.0

**Table 6***Race of Respondents*

<b>Race</b>	<b>N</b>	<b>%</b>
Asian/Asian American	9	2.5
Black/African American*	4	1.1
Latina/o/x	12	3.4
Native American*	1	0.3
Native Hawaiian or other Pacific Islander*	1	0.3
White	316	88.5
Other	14	3.9

\*dropped from ANOVA analysis.

**Table 7***Years Respondents Taught in Nursing*

<b>Years of Teaching</b>	<b>N</b>	<b>%</b>
Less than a year	10	2.8
1-5 years	86	24.1
6-10 years	90	25.2
11-15 years	63	17.6
16-20 years	47	13.2
21-25 years	26	7.3
26-30 years	12	3.4
Over 30 years	23	6.4

**Exploratory Factor Analysis Protocols**

Because data collected for each identity was non-normally distributed (see Appendices F-I), I used Principal Axis Factor as an extraction method in my factor analyses. Researchers recommend Principal Axis Factor as an extraction method when data violates the assumption of normality (Arifin 2017; Yong & Pearce 2013).

To conduct exploratory factory analysis for each identity, I followed the following protocol:

1. Determined appropriate rotation.
2. Determined factorability.
3. Evaluated and improved quality of the factor solution.

***Determining Appropriate Rotation***

Using Principal Axis Factoring, I performed oblique and orthogonal rotations to compare correlations between factors as recorded in the component correlation matrix for each identity. I then determined the rotation method best suited for analysis. Orthogonal rotation is

recommended when factors are assumed uncorrelated while oblique rotation is recommended when factors are considered to be correlated (DeCoster, 1998; Rummel, 1980). Researchers specifically advise that oblique rotation be implemented when factors demonstrate at least one correlation exceeding 0.32 (Arifin 2017; Yong & Pearce, 2013). I chose to use oblique rotations (*Direct Oblimin*) to analyze all four identities because many factors demonstrated correlations exceeding 0.32 (see Appendix N). Additionally, researchers recommend oblique rotation techniques for non-normally distributed data (Arifin 2017).

### ***Determining Factorability***

To determine factorability, I first examined the patterned relationship among the items for each identity. By examining the correlation matrices created by EFA, I was able to determine which of the 22 items had a large number of low correlation coefficients ( $r < |0.30|$ ). Because items with low correlations to other items lack the patterned relationships required for quality EFA, I dropped all items that failed to demonstrate at least one correlation coefficient exceeding 0.30 from each identity's analysis (see Appendices O-R). I also examined each identity's correlation matrix to determine if any items demonstrated correlation coefficients exceeding 0.90. Correlation coefficients that exceed 0.90 indicate the potential problem of multicollinearity. None of the items in my analysis demonstrated correlation coefficients exceeding 0.90 (see Appendix O-R) (Yong & Pearce, 2013).

Second, I examined the results of the Bartlett's test of sphericity to confirm that the data for each identity possessed patterned relationships among the remaining items. A significant test result indicates that meaningful correlations exist between identity items and EFA is therefore appropriate (Arifin, 2017). Items for all four identities produced significant Bartlett's tests of sphericity thus indicating EFA an appropriate tool for analysis (specific values for each identity's

Bartlett's tests of sphericity may be found in the results section).

Third, I verified that the data for each identity was suitable for EFA by looking at the Kaiser-Meyer-Obkin (KMO) measure of sampling adequacy and the diagonal values the Anti-Image Correlation Matrix for each identity. KMO is a relative measure of the amount of correlation in a data set and communicates whether analyzing a correlation matrix is appropriate. KMO values greater than 0.50 indicate sampling adequacy for EFA (Williams et al., 2010). Additionally, if diagonal values of the Anti-Image Correlation Matrix exceed 0.50, distinct and reliable factors may be produced via EFA (Yong & Pearce, 2013). Data for all four identities produced KMO values and Anti-Image Correlation Matrix values that exceeded 0.50 thus indicating EFA appropriate for my data sets (See Appendices O-R for Anti-Image Correlation Matrices; specific KMO values may be found in the results section).

### ***Evaluating and Improving the Quality of the Factor Solutions***

After determining the factorability of each identity group's data, I used an iterative process to adjust factor-loading levels and the items included in each EFA in order to maximize the fit of each model produced. In so doing, I ran multiple EFA scenarios and evaluated the quality of each EFA factor solution by investigating each models' parsimony, the total percent of variation explained by the extracted factors, internal reliability of factors (Cronbach's alpha values), and the percentage of non-redundant residuals. Models with good fit demonstrate parsimonious pattern matrices with minimal factor cross loading, explain at least 60% of the total variance, have factors with internal consistency, and possess less than 50% of the non-redundant residuals with values greater than  $|0.05|$  (Arifin, 2017; Hair et al, 2010; Yong & Pearce, 2013). Final EFA for all four identities largely met all of these criteria (see Results section for details).

Cross loadings occur when a single item loads into more than one factor with a loading value  $\geq 0.30$ . Cross loadings provide for a model with poor parsimony because cross-loaded

items are not specific to one factor and make interpretation difficult (Arifin, 2017). Because of this, I dropped items that produced cross loadings from my analyses.

I accounted for internal consistency for extracted factors by calculating Cronbach's alpha values. Cronbach's alpha values below 0.60 are considered unacceptable, values 0.60 to 0.65 are considered undesirable, values 0.65 to 0.70 are considered minimally acceptable, 0.70 to 0.80 are considered respectable, 0.8 to 0.9 are considered very good, and any values exceeding 0.9 likely indicate issues with multicollinearity (DeVellis, 2012). For each identity analysis, I only included items for analysis that maximized internal consistency for the extracted factors.

To determine which factors to retain, Kaiser's Rule recommends keeping extracted factors with Eigenvalues greater than one (Arifin 2017). Eigenvalues capture the proportion of information represented by a factor. Extracted factors with a value of one hold information for one "whole" item. It is not meaningful to keep factors for interpretation that hold less than an entire unit of information (Arifin 2017). Therefore, I kept all extracted factors producing Eigenvalues values exceeding one for all identity analyses.

By conducting multiple EFA tests, I determined that a factor loading cut-off value of 0.3 provided models with the best fit for my research. I, therefore, did not include items that loaded below 0.3 in any of my analyses. Factor loadings are partial correlation coefficients of factors to items and may be thought of as capturing how much a factor explains an item (Arifin 2017). Hair et al. (2010) recommend interpreting factor loadings as indicated by Table 8.

**Table 8***Interpretation of Factor Loading Values*

Absolute Value	Interpretation
0.3 – 0.49	Minimally acceptable
$\geq 0.5$	Practically significant
$\geq 0.7$	Well-defined structure

In addition to examining factor loading values, I also examined item communalities to determine which items to exclude in order to increase model fit. Communalities explain the percentage of item variance explained by the extracted factors. Cut-off values for communalities depend on what a researcher deems to be an appropriate amount of explained variance for the study (Arifin, 2017). Osborne et al (2008) recommends utilizing items with communalities above 0.4 while Child (2006) suggests that items with communalities exceeding 0.2 may be used. All items for all EFA tests demonstrated communalities greater than 0.2 (see Appendix S).

**Probing for Demographic Effects Protocols**

To probe for possible demographic effects on respondent's feedback, I used one-way ANOVA tests followed by post hoc Tukey HSD tests. When demographic categories provided for only two comparison groups (e.g. employed vs. unemployed), I implemented Independent t tests.

Most statistically significant effects from demographics proved to communicate negligible differences. Because of this, for the purpose of interpretation, I focused on statistically significant results from the demographic data that represented at least a full categorical

difference on the Likert scale and a scale difference near or exceeding 1.0. I represented such cases graphically in the Results sections for each identity analysis.

### **Reliability and Validity**

In order to enhance the reliability and validity of the quantitative survey, I involved nursing faculty at the College of Southern Idaho (CSI) to pilot the research survey. Ten full-time faculty deliver an Associate of Science Degree in Registered Nursing at the College of Southern Idaho. The College of Southern Idaho was not included as a study site in the actual research. In addition, the Burk-Tully method provides inherent validity in its design because the survey tool allows respondents to designate the items that they perceive to be valid descriptors of identity. The online survey tool (Qualtrics XM) allowed randomization of the characteristics presented as well as the collection of respondent time on question both of which allowed for increased validity.

The survey sample represents all nursing faculty teaching at post-secondary institutions in the Mountain States (excluding the College of Southern Idaho) involved in registered nursing education. The purposeful, cross-sectional survey targeted individuals with knowledge relevant to this study and allowed me to investigate the professional identity of nursing faculty teaching in the Mountain States (Nardi, 2014). In order to encourage response, I raffled off three \$50 Amazon gift cards which were awarded after the survey had closed.

## Chapter IV

### Results

As I hypothesized, exploratory factor analysis of all identity groups successfully produced latent factors describing each group's archetypal identity (see Table 9). Moreover, the archetypal identities extracted similar factors. Nursing faculty and nursing student identities generated the same four latent factors: "Foundational values," "Modern roles," "Professional interactions," and "Intrinsic motivations." Practicing nurse identity also generated the factors "Foundation values," "Modern roles, and "Intrinsic motivation," but produced the unique factor of "Practical motivation." The physician identity produced the three commonly generated factors of "Intrinsic motivation," "Professional interactions," and "Modern roles," while generating the two unique factors of "Professional mindset," and "Organizational position."

**Table 9**

*Summary of Extracted Factors for all Archetypal Identities*

<b>Extracted Factors</b>	<b>Faculty Identity</b>	<b>Student Identity</b>	<b>Practicing Nurse Identity</b>	<b>Physician Identity</b>
<b>Foundational values</b>				
Eigenvalue	5.208	4.746	5.239	
Percent of Variation	30.635%	28.213%	37.418%	
Cronbach's Alpha	0.857	0.829	0.870	
<b>Modern roles</b>				
Eigenvalue	2.154	2.291	2.018	1.587
Percent of Variation	12.669%	13.476%	14.411%	8.818%
Cronbach's Alpha	0.681	0.579	0.650	0.555
<b>Professional interactions</b>				
Eigenvalue	1.365	1.570		2.301
Percent of Variation	8.032%	9.236%		12.785%
Cronbach's Alpha	0.609	0.490		0.612
<b>Intrinsic motivations</b>				
Eigenvalue	1.043	1.006	1.086	3.745
Percent of Variation	6.137%	5.916%	7.760%	20.806%
Cronbach's Alpha	0.751	0.731	0.756	0.761
<b>Practical motivation</b>				



Eigenvalue			1.018	
Percent of Variation			7.270%	
Cronbach's Alpha			0.672	
<b>Professional mindset</b>				
Eigenvalue				1.348
Percent of Variation				7.492%
Cronbach's Alpha				0.594
<b>Organizational position</b>				
Eigenvalue				1.125
Percent of Variation				6.248%
Cronbach's Alpha				0.525

Probing identity responses for variations based on demographic data did produce some statistically significant results. Most of the differences, however, may be attributed to the amount of experiences respondents have had in the nursing profession and/or nursing education. In addition, many of the statistically significant differences based on demographics provided no useful meaning. In these cases, the differences between groups' means fell within the same Likert level. For example, full-time employed respondents ranked "Lead others" at the agree level ( $M = 4.41$ ) while part-time employed respondents ranked "Lead others" at the agree level ( $M = 4.63$ ).

### **Nursing Faculty Identity Item Factor Analysis**

Following the protocol outlined in my methods section, I analyzed the data for nursing faculty identity. In the final EFA for nursing faculty identity, 17 items generated a Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy of 0.864 and a significant Bartlett's test of sphericity ( $\chi^2 (136) = 1909.055, p < 0.05$ ). The diagonals of the anti-image correlation matrix were greater than 0.5 and communalities all exceeded 0.2 (see Appendices O & S). The final identity solution captured 57.473% of the total variance (see Table 9).

The items "Not prioritize their own needs over others," "Question authority," "Be self-sufficient in their work," "Seek assistance with their work," and "Not focus on financial aspects

of their job,” lacked any correlations of 0.30 or greater with other items and were therefore dropped from factor analysis.

The remaining 17 nursing faculty identity items all loaded into at least one of four latent factors in the pattern matrix (see Table 10). The first factor contained seven items that reflected traditional nursing values as articulated in the literature. Hence, I labeled the first factor, “Foundational values.” The second factor strongly captured two items that reflect the behaviors required of nurses in modern health care settings. I therefore labeled the second factor, “Modern roles.” The third factor captured four items that describe how nurses interact with others. Consequently, I labeled the third factor, “Professional interactions.” Finally, the fourth factor captured six items that once again reflected traditional nursing values, however, all of these items loaded negatively. Moreover, two of the items, “Selflessly serve others” and “Always care” not only demonstrated negative correlations to the fourth factor but at the same time loaded with positive correlations to the first factor “Foundation values.” Because the top three loading items dealt with motivational forces, I chose to call the fourth factor “Intrinsic motivation.”

**Table 10***Pattern Matrix for Nursing Faculty Archetypal Identity*

	Factor			
	1	2	3	4
Work for little compensation or reward	0.858			
Not think about the financial rewards of their job	0.622			
Never complain	0.595			
Selflessly serve others	0.502			-0.312
Never get angry	0.437			
Always care	0.392			-0.320
Not work as subordinates	-0.332			
Lead others		0.764		
Think critically		0.675		
Not be intimidating			0.594	
Not give orders and directives without input			0.458	
Remain seen			0.359	
Be stoic			-0.302	
Feel their work is divine				-0.672
Be angelic in their work				-0.629
Feel called to their work				-0.540
Provide emotional support to others				-0.366

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 11 iterations.

Note: Factor loadings &lt; .3 are suppressed.

The first factor extracted to describe nursing faculty archetypal identity, “Foundational values,” loaded the most identity items. Seven of the 17 items loaded into the “Foundational values” factor. The item “Work for little compensation or reward” showed the highest loading value (0.858) of all items. Factor loadings greater than or equal to 0.7 indicate items with well-defined structures for interpretation (Hair et al., 2010). Three items demonstrated factor loadings in the 0.5 – 0.69 range, thus indicating practical significance for interpretation (Hair et al., 2010). “Not think about the financial rewards of their jobs,” “Never complain,” and “Selflessly serve

others,” all loaded at the level of practically significant. Finally, three items loaded in the 0.3 – 0.49 range. “Never get angry,” “Always care,” and “Not work as subordinates,” all loaded as minimally acceptable for interpretation (Hair et al., 2010). Of note, all of the factors that loaded in the “Foundational values” factor are well articulated in the nursing literature as values that support the nurturing roles expected of practicing nurses (Bartholomew, 2006; Lynaugh, n.d.; Roberts, 1983). The items “Work for little compensation or reward,” “Not think about the financial rewards of their job,” “Selflessly serve,” and “Always care” reflect the altruism expected of nurses since the foundation of their profession. The items “Never complain,” “Never get angry,” and “Not work as subordinates” reflect the foundational expectations that practicing nurses function in passive, supportive roles. “Not work as subordinates” loaded with an inverse relationship to the “Foundational values” factor, meaning nursing faculty are expected to work as subordinates.

The second factor, “Modern roles,” loaded the two items “Lead others” and “Think critically.” “Lead others” loaded with a 0.764 factor loading indicating well-defined structure for interpretation, while “Think critically” loaded with a 0.675 loading factor indicating practical significance for interpretation. Researchers recommend interpreting factors that load at least three or more items. Factors with less than three items, however, are justified, when factor loadings are strong and the items demonstrate strong correlation with each other and weak correlation with the other items (Yong & Pearce, 2013). Both of which are true for “Lead others” and “Think critically.” Factor two, similar to Factor one, reflects role expectations for practicing nurses. Specifically, “Modern roles,” captures the expanded professional expectations for practicing nurses that arose with technology driven medical care. Lynaugh (n.d.) describes how advancing technology required practicing nurses to master new and complex knowledge and

skills to care for patients while leading others and thinking critically.

The third factor, “Professional interactions,” loaded four total items; “Not be intimidating” loaded at a practically acceptable level of 0.594, while three items, “Not give orders and directives without input,” “Remain seen,” and “Be stoic,” loaded at the minimally acceptable levels of 0.458, 0.359 and -0.302. Taken together these items described professional interaction expectations of nursing faculty. “Be stoic” loaded inversely to the factor, indicating that nursing faculty are *not* expected to be stoic. This finding is interesting as “Be stoic” loaded with positive correlations for nursing students and physicians. I suspect that nursing faculty, who are not placed in emotional charged health care situations, may feel less need to remain stoic for suffering patients and families. The item “Remain seen” supports the role of faculty as they control and direct the education of nursing students. The item “Not give directives and orders without input” also reflects the role of faculty considering nursing educational programs require coordination between multiple faculty members who must organize and work as a team to train students.

Despite that fact that I have interpreted the three items loaded into “Professional interactions” as reflecting the role of nursing faculty, one could argue that “Not give directives and orders without input” and “Remain seen,” similar to the items loading into the other three factors, actually reflect the expectations placed on practicing nurses. The modern role of practicing nurses requires a team approach with leadership expectations.

Factor four “Intrinsic Motivation” loaded with six items. Three items “Feel their work is divine” (-0.672), “Be angelic in their work” (-0.629), and “Feel called to their work” (-0.540) loaded as practical for interpretation, while three items “Provide emotional support to others” (-0.366), “Always care” (-0.320) and “Selflessly serve others” (-0.320) loaded as minimally

acceptable for interpretation. All of these items loaded inversely to the factor indicating that nursing faculty are *not* expected to feel their work is divine, *not* expected to be angelic in their work, *not* expected to feel called to their work, *not* expect to provide emotional support to others, *not* expected to always care, and *not* expect to selflessly serve others.

The negative loading of the items in “Intrinsic Motivation” opposes the characteristics published in nursing research. According to the literature, those in the nursing profession, or studying to become nurses, should feel their work is divine, be angelic in their work, feel called to their work, provide emotional support to others, always care, and selflessly serve others (Bartholomew, 2006; Lynaugh, n.d.; Roberts, 1983). The fact that these items loaded opposite to what the literature predicts provides direct evidence that the identity of nursing faculty is oppressed. Oppression theory predicts that an oppressed group will disavow components of its identity in order to align with an oppressive culture (Freire, 2005). Nursing faculty identity disavows these components as predicted by oppression theory.

The contradictory pattern of items loading into “Intrinsic Motivation” is further illustrated by the fact that the items “Selflessly serve others,” and “Always care,” while loading opposite to the established core values of nursing, loaded positively into the factor “Foundational values.” Accordingly, good nursing faculty are expected to selflessly serve others and always care, while at the same time *not* selflessly serve others and *not* always care.

Although contradictory in nature, the loading of “Selflessly serve others” and “Always care” provides further evidence supporting the predictions of oppression theory. Oppression theory predicts that an oppressed group will feel pressure to maintain its foundational values while at the same time rejecting its foundational values in order to adopt values of the oppressor in order to gain advantages (Freire 2005). Clearly, the loading pattern generated for nursing

faculty archetypal identity demonstrates such a phenomenon. Nursing faculty find themselves in the untenable position of the oppressed; they struggle to be true to elements of their core values while rejecting them at the same time.

Four extracted factors demonstrated Eigenvalues greater than one. “Foundational values,” with an Eigenvalue of 5.208, explained 30.635% of the variance. “Modern roles,” with an Eigenvalue of 2.154, explained an additional 12.669% of the variance. “Professional interactions,” with an Eigenvalue of 1.365, explained an additional 8.032% of the variance. “Intrinsic motivation,” with an Eigenvalue of 1.043, explained an additional 6.137% of the variance. The four principle factors explained 57.474% of the total variance. Although the total variance captured is below the 60% mark recommended by Hair et al. (2010), I found the total variance captured by my analysis adequate for the research questions I was investigating.

The four-factor model indicated a good fit for the data. None of the items cross-loaded thereby creating a parsimonious pattern matrix for interpretation. Additionally, only 5% of the non-redundant residuals had absolute values greater than 0.05 (see Appendix O). Finally, internal consistency, as measured by Cronbach’s alpha, was very good for “Foundational values” (0.857), respectable for “Intrinsic motivation” (0.751), minimally acceptable for “Modern roles” (0.681) and undesirable for “Professional interactions” (0.609).

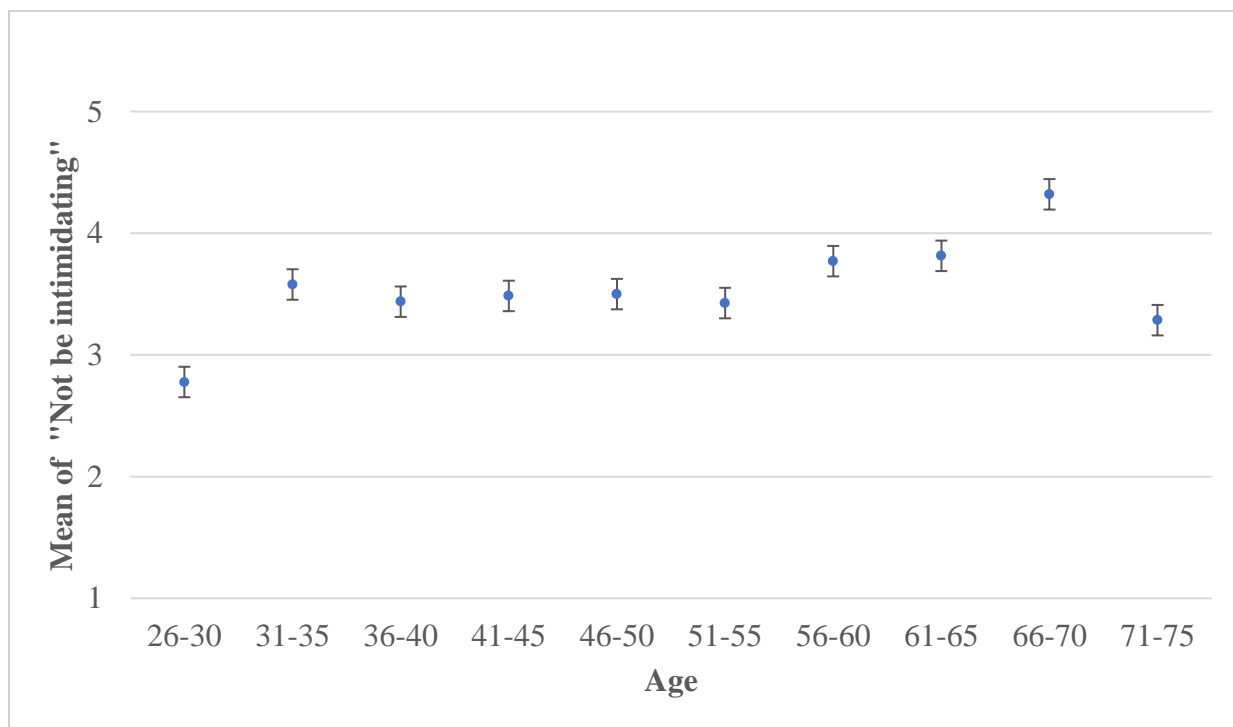
### ***Effects of Age on Faculty Identity Items***

Using an ANOVA test, I probed all items to determine if age affected faculty identity feedback. Age proved significant at the  $p < .05$  level for “Not be intimidating,” [ $F(9, 345) = 2.131, p = 0.027$ ], “Remain seen,” [ $F(9, 345) = 2.474, p = 0.010$ ], and “Not give orders and directives without input” [ $F(9, 345) = 2.456, p = 0.010$ ]. Age did not significantly affect any other loaded identity items.

The only items that demonstrated statistically significant differences that exceeded one unit on the Likert scale in post hoc testing were “Not be intimidating,” “Remain seen,” and “Not give orders and directive without input.” The Tukey HSD test indicated that 26-30 year-olds ranked “Not be intimidating” lower ( $M = 2.78$ ,  $SD = 1.302$ ) than 66-70 year-olds ( $M=4.32$ ,  $SD = 1.180$ ,  $p = 0.037$ ). Respondents between the ages of 41-45 ranked “Remain seen” lower ( $M = 3.09$ ,  $SD = 1.234$ ) than 66-70 year-olds ( $M = 4.08$ ,  $SD = 1.115$ ,  $p = 0.035$ ). Respondents between the ages of 26-30 ranked “Not give orders and directives without input” lower ( $M = 2.89$ ,  $SD = 1.167$ ) than 66-70 year-olds ( $M = 4.40$ ,  $SD = 0.645$ ,  $p = 0.010$ ). Respondents between the ages of 41-45 ranked “Not give orders and directives without input” lower ( $M = 3.45$ ,  $SD = 1.003$ ) than 66-70 year-olds ( $M = 4.40$ ,  $SD = 0.645$ ,  $p = 0.027$ ) (see Figures 3-5).

**Figure 3**

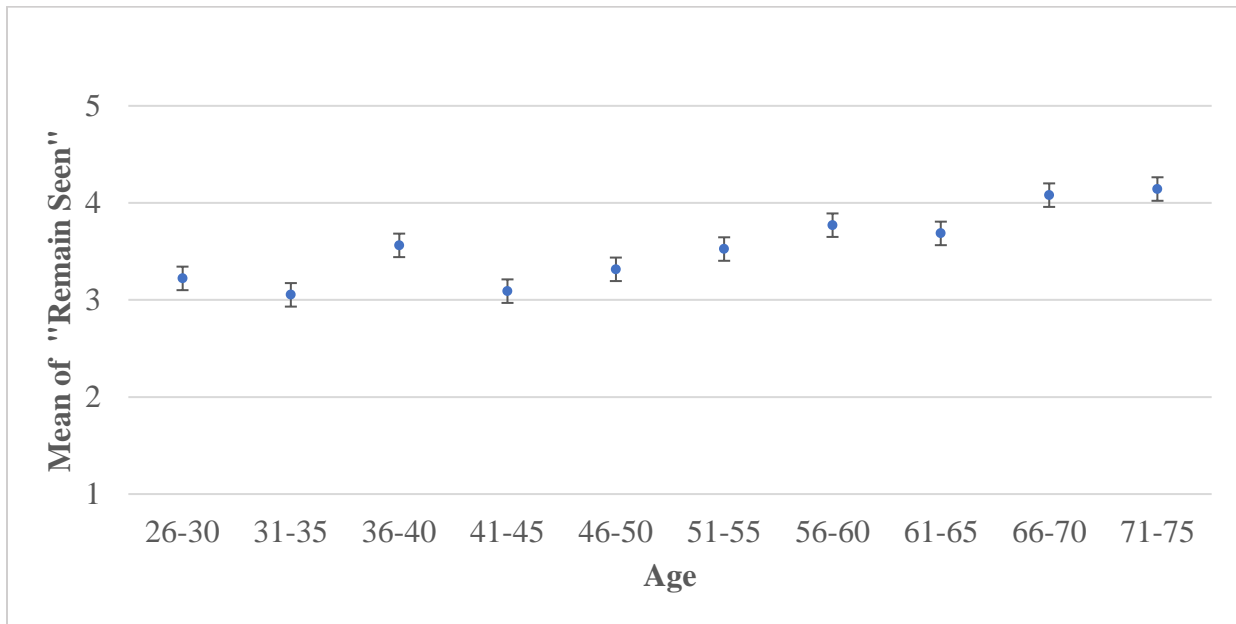
*Mean Responses for Nursing Faculty “Not be Intimidating” by Age*





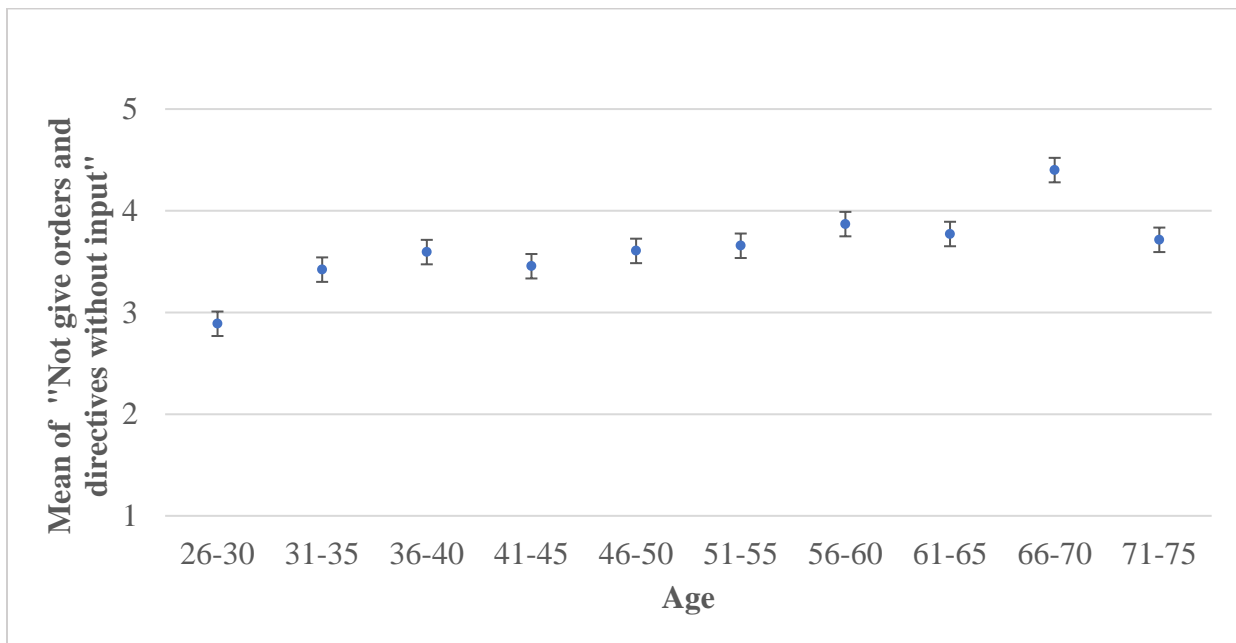
**Figure 4**

*Mean Responses for Nursing Faculty "Remain Seen" by Age*



**Figure 5**

*Mean Responses for Nursing Faculty "Not give orders and directives without feedback" by Age*



I believe that the effect of age on “Not be intimidating” may be explained by the fact that faculty age 66-70 adopted professional values of nursing during a time in which the passive role of nurses was more vogue. Conversely, faculty age 26-30 have adopted professional nursing values that have had more time to evolve to incorporate the more modern expectations of nurses created by technology.

The effects of age on “Remain seen” and “Not give orders and directives without input” are likely due to the confidence and knowledge a faculty member gains from experience. Older faculty, therefore, feel it more appropriate to remain seen and give orders and directives without input.

### ***Effects of Employment Status on Faculty Identity Items***

The employment status of respondents (full-time vs. part-time) generated no statistically significant effects on identity data that exceeded one unit on the Likert scale. However, Independent T tests found some statistically significant effects of less than one Likert unit for the items “Lead others” and “Remain seen.” Respondents employed full-time ranked “Lead others” lower ( $M = 4.41$ ,  $SD = 0.844$ ) than respondents employed part-time ( $M = 4.63$ ,  $SD = 0.528$ ),  $t(350) = -2.528$ ,  $p = 0.013$ . Cohen’s  $d$  ( $-0.281$ ) indicated that a respondent’s employment status had minimal effect on “Lead others.” Respondents employed full-time also ranked “Remain seen” lower ( $M = 3.52$ ,  $SD = 1.156$ ) than respondents employed part-time ( $M = 3.9$ ,  $SD = 1.046$ ),  $t(350) = -2.142$ ,  $p = 0.033$ . Cohen’s  $d$  ( $-.330$ ) indicated that respondent employment status had minimal effect on “Remain seen.” Employment status demonstrated no effect on any other loaded identity items.

### ***Effects of Gender on Faculty Identity Items***

A respondent’s gender also failed to produce any statistically significant effects on identity data that exceeded one unit on the Likert scale. However, Independent T tests found

some statistically significant effects of less than one Likert-unit in faculty identity scores for “Work for little compensation or reward,” “Lead others,” and “Not focus on the financial aspects of their job.” Female respondents ranked “Work for little compensation or reward” higher ( $M = 3.65$ ,  $SD = 1.306$ ) than males ( $M = 3.14$ ,  $SD = 1.221$ ),  $t(351) = 2.362$ ,  $p = 0.019$ . The effect size of gender on “Work for little compensation or reward” was small (Cohen’s  $d = 0.388$ ). Female respondents also ranked “Lead others” higher ( $M = 4.48$ ,  $SD = 0.790$ ) than males ( $M = 4.19$ ,  $SD = 0.833$ ),  $t(351) = 2.207$ ,  $p = 0.028$ . The effect size of gender on “Lead others” was small (Cohen’s  $d = 0.363$ ). Finally, female respondents ranked “Not focus on the financial aspects of their job” higher ( $M = 3.98$ ,  $SD = 0.988$ ) than males ( $M = 3.64$ ,  $SD = 0.956$ ),  $t(351) = 2.0678$ ,  $p = 0.039$ . The effect size of gender on “Not focus on the financial aspects of their job” was small (Cohen’s  $d = 0.340$ ). Gender did not significantly affect any other loaded identity items.

### ***Effects of Program Level on Faculty Identity Items***

Using an ANOVA test, I probed all items to determine if the level of program in which respondents taught affected identity feedback. The level of program in which a respondent taught significantly affected “Be angelic in their work” [ $F(3, 353) = 4.575$ ,  $p = 0.004$ ], “Never get angry” [ $F(3, 353) = 4.430$ ,  $p = 0.004$ ], “Selflessly serve others” [ $F(3, 353) = 3.026$ ,  $p = 0.030$ ], and “Never complain” [ $F(3, 353) = 3.576$ ,  $p = 0.014$ ]. The level of program in which respondents taught did not significantly affect any other loaded identity items.

For program level, no identity items demonstrated statistically significant differences that exceeded one unit on the Likert scale in post hoc testing for the effects of program level on faculty identity. However, post hoc comparisons using the Tukey HSD test found some statistically significant differences of less than one Likert unit for the items “Be angelic in their work,” “Never get angry,” “Selflessly serve others,” and “Never complain.” Nursing faculty teaching in associate’s degree programs ranked “Be angelic in their work” higher ( $M = 3.44$ ,  $SD$

= 1.230) than faculty teaching in master's degree programs ( $M = 2.83$ ,  $SD = 1.288$ ,  $p = 0.003$ ). Faculty teaching in associate's degree programs ranked "Never get angry" higher ( $M = 3.85$ ,  $SD = 1.137$ ) than faculty teaching in master's degree programs ( $M = 3.24$ ,  $SD = 1.144$ ,  $p = 0.002$ ). Faculty teaching in associate's degree programs ranked "Selflessly serve others" higher ( $M = 4.34$ ,  $SD = 0.987$ ) than faculty working in master's degree programs ( $M = 3.93$ ,  $SD = 1.143$ ,  $p = 0.02$ ). Finally, faculty working in associate's degree programs ranked "Never complain" higher ( $M = 3.77$ ,  $SD = 1.146$ ) than faculty teaching in master's degree programs ( $M = 3.21$ ,  $SD = 1.339$ ).

### ***Effects of Race on Faculty Identity Items***

I probed the effect of race on faculty identity items using an ANOVA test. Race did not significantly affect any extracted identity items.

### ***Effects of Years Taught on Faculty Identity Items***

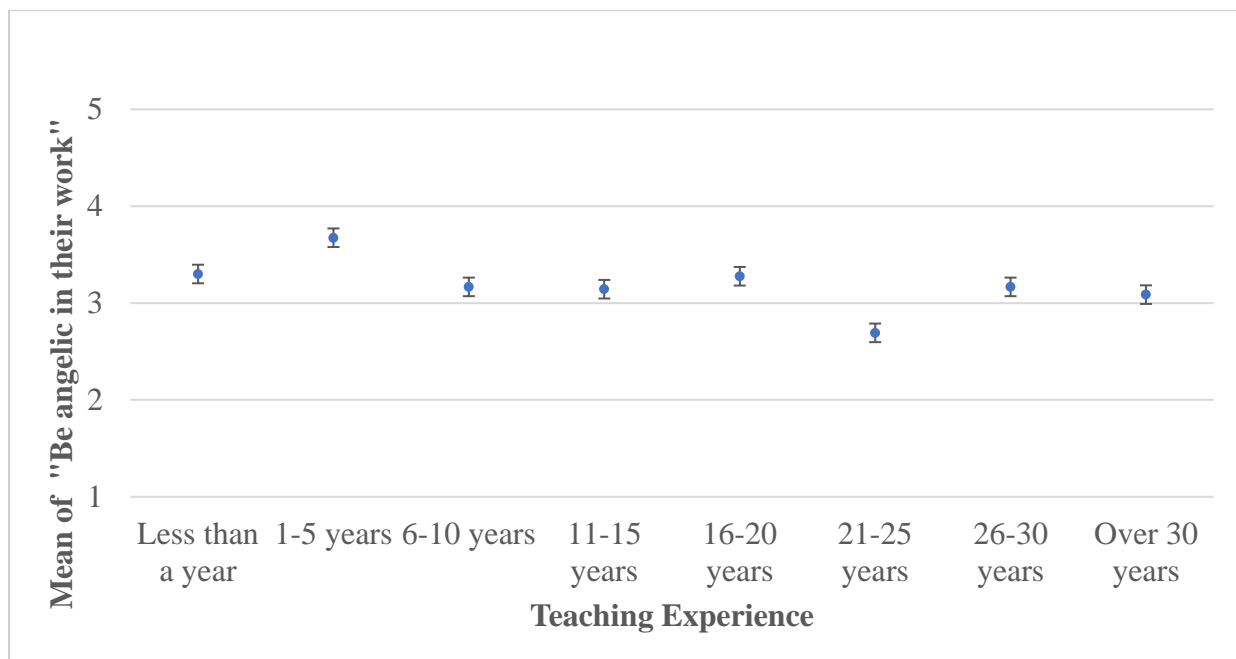
Finally, I investigated the effects of teaching experience (years taught) on faculty identity items using an ANOVA test. The years a faculty member has taught significantly affected "Feel called to their work" [ $F(7, 349) = 2.137$ ,  $p = 0.039$ ], "Be angelic in their work" [ $F(7, 349) = 2.420$ ,  $p = 0.020$ ], "Never get angry" [ $F(7, 349) = 2.576$ ,  $p = 0.013$ ], "Always care" [ $F(7, 349) = 2.560$ ,  $p = 0.014$ ], "Selflessly serve others" [ $F(7, 349) = 2.616$ ,  $p = 0.012$ ], "Not work as subordinates" [ $F(7, 349) = 2.555$ ,  $p = 0.014$ ], and "Not give orders and directives without input" [ $F(7, 349) = 2.405$ ,  $p = 0.020$ ]. Years of teaching did not significantly affect any other loaded identity items.

For years of teaching experience, the only items that demonstrated statistically significant differences that exceeded, or came near exceeding, one unit on the Likert scale in post hoc testing were "Be angelic in their work," "Never get angry," and "Not work as subordinates." Post

hoc comparisons using Tukey HSD tests found that faculty who have taught 1-5 years rank “Be angelic in their work” higher ( $M = 3.67$ ,  $SD = 1.183$ ) than faculty who have taught 21-25 years ( $M = 2.69$ ,  $SD = 1.289$ ,  $p = 0.010$ ). Faculty who have taught less than a year rank “Never get angry” higher ( $M = 4.40$ ,  $SD = 0.516$ ) than faculty who have taught over 30 years ( $M = 3.00$ ,  $SD = 1.243$ ,  $p = 0.036$ ). Finally, faculty who have taught 21-25 years rank “Not work as subordinates” higher ( $M = 3.92$ ,  $SD = 1.324$ ) than faculty who have taught 6-10 years ( $M = 2.82$ ,  $SD = 1.223$ ,  $p = 0.003$ ) (see Figures 6-8).

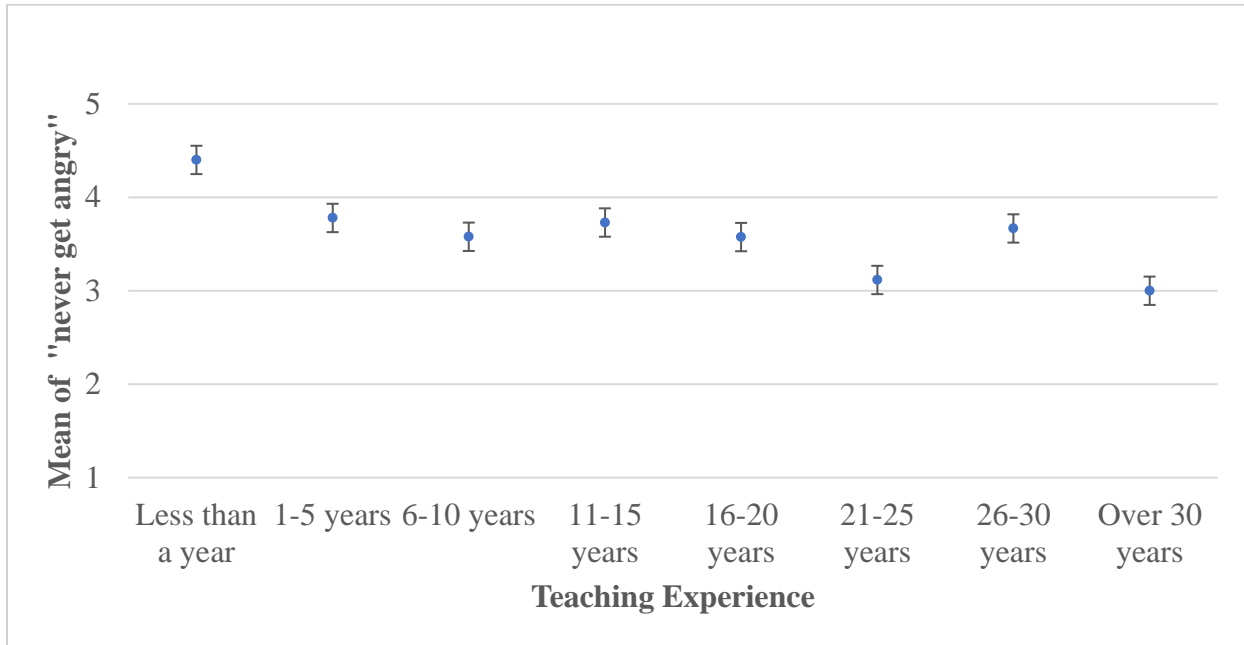
**Figure 6**

*Mean Responses for Nursing Faculty “Be Angelic in Their Work” by Years of Experience*



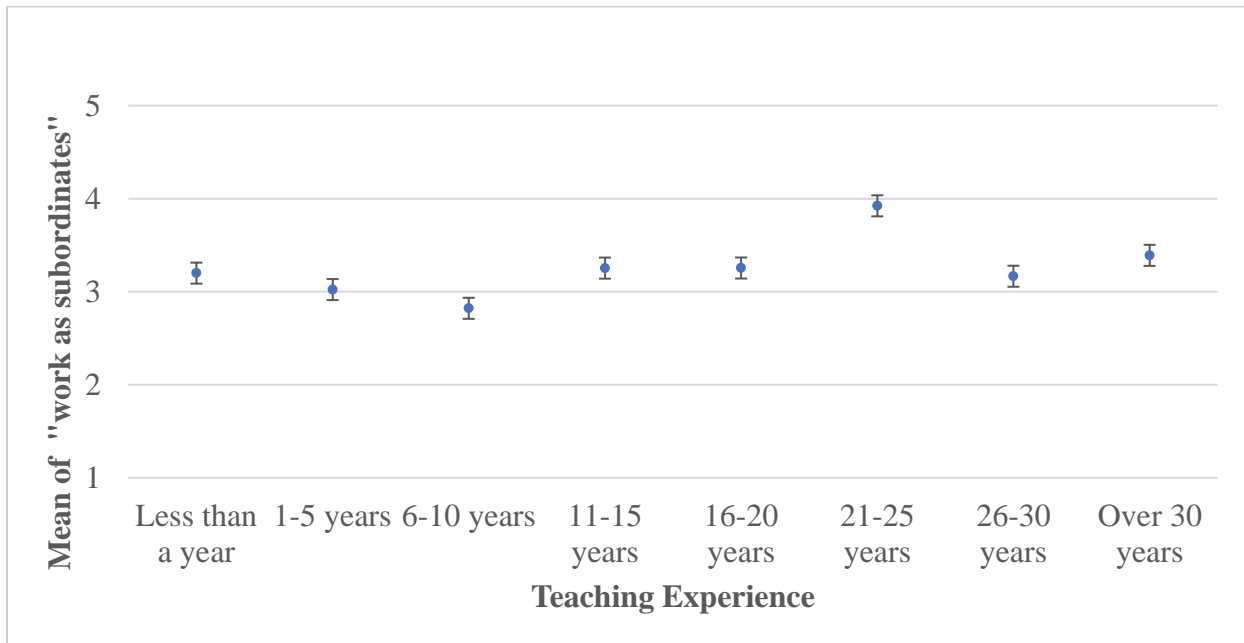
**Figure 7**

*Mean Responses for Nursing Faculty “Never get Angry” by Years of Experience*



**Figure 8**

*Mean Responses for Nursing Faculty for “Not Work as Subordinates” by Years of Experience*



I attribute the effects of teaching experience on “Be angelic,” “Never get angry,” and “Not work as subordinates” to the general effect of experience upon human expectations. I believe that those with less experience are more apt to hold expectations that over or under estimate reality. Accordingly, faculty with less years of teaching experience rank two of these items higher and one item lower than faculty who have collected more experiences.

The items “Feel called to work,” “Always care,” “Selflessly serve others,” and “Not work as subordinates” exhibited statistically significant Turkey HSD test results that were less than one Likert unit. Faculty who have taught 1-5 years rank “Feel called to work” higher ( $M = 4.36$ ,  $SD = 0.701$ ) than faculty who have taught over 30 years ( $M = 3.74$ ,  $SD = 1.054$ ,  $p = 0.042$ ). Faculty who have taught 1-5 years rank “Always care” ( $M = 4.65$ ,  $SD = 0.628$ ) higher than faculty who have taught 21-30 years ( $M = 4.19$ ,  $SD = 0.801$ ,  $p = 0.029$ ). Faculty who have taught 6-10 years rank “Selflessly serve others” higher ( $M = 4.41$ ,  $SD = 0.833$ ) than faculty who have taught 21-30 years ( $M = 3.73$ ,  $SD = 1.116$ ,  $p = 0.035$ ). Finally, faculty who have taught 21-25 years rank “Not work as subordinates” higher ( $M = 3.92$ ,  $SD = 1.324$ ) than faculty who have taught 1-5 years ( $M = 3.02$ ,  $SD = 1.274$ ,  $p = 0.037$ ). Tukey’s HSD test found no significant difference between age groups for “Not give orders and directives without input.”

### **Nursing Student Identity Item Factor Analysis**

Following the protocol outlined in my methods section, I analyzed the data for nursing student identity. In the final EFA for nursing faculty identity, 17 items produced a KMO measure of sampling adequacy of 0.849 while Bartlett’s test of sphericity was significant ( $\chi^2 (136) = 1855.158$ ,  $p < 0.05$ ). The diagonals of the anti-image correlation matrix were greater than 0.5 and communalities all exceeded 0.2 (see Appendices P & S). The final identity solution captured 56.841% of the total variance (see Table 9).

The items “Not prioritize their own needs over others,” “Question authority,” “Seek assistant with their work,” and “Not focus on the financial aspects of their job” lacked any correlations of 0.30 or greater with other items and were therefore dropped from factor analysis. I also dropped “Always care” from the final analysis because it cross-loaded.

All 17 nursing student identity items loaded into at least one of the four extracted factors (see Table 11). Additionally, all extracted factors for nursing students shared most of the items captured by the nursing faculty factors. Because of this, I found it appropriate to label the nursing student factors to match the labels given to the nursing faculty extracted factors. Namely, I labeled the first factor “Foundational values,” the second factor “Modern roles,” the third factor “Professional interactions,” and the fourth factor “Intrinsic motivation.”



**Table 11***Pattern Matrix for Nursing Student Archetypal Identity*

	Factor			
	1	2	3	4
Never complain	0.730			
Never get angry	0.706			
Not think about the financial rewards of their job	0.593			
Not work as subordinates	-0.568	0.303		
Work for little compensation or reward	0.560			
Remain seen	-0.536			
Selflessly serve others	0.527			
Be stoic	0.426			
Lead others		0.707		
Be self-sufficient in their work		0.536		
Think critically		0.448		
Provide emotional support to others		0.385		
Not give orders and directives without input			0.623	
Not be intimidating			0.494	
Feel their work is divine				-0.932
Be angelic in their work				-0.639
Feel called to their work				-0.461

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 6 iterations.

The first factor extracted to describe nursing student archetypal identity, “Foundational values,” loaded the most identity items. Eight of the 17 items loaded into “Foundational values.” The items “Never complain” (0.730) and “Never get angry” (0.706) loaded with well-defined structures for interpretation. “Not think about the financial rewards of their jobs” (0.593), “Not work as subordinates” (-0.568), “Work for little compensation or reward” (0.560), “Remain seen” (-0.536), and “Selflessly serve others” (.0527) all loaded at the level allowing practical interpretation. “Be stoic” (0.426) loaded as minimally acceptable for interpretation.

Similar to the first factor extracted for nursing faculty, “Foundation values” for nursing students loaded the most items. All items loaded into “Foundational values” represent values found in nursing literature that describe the nurturing roles expected of practicing nurses at the founding of their profession (Bartholomew, 2006, Lynaugh, n.d., Roberts, 1983). “Never complain,” “Never get angry,” “Not work as subordinates” (which loaded negatively indicating the expectation is to work as subordinates), “Remain seen” (which loaded negatively indicating the expectation is to remain unseen), and “Be stoic,” all represent the foundational expectation that nurses serve in passive, supportive roles. “Not think about the financial rewards of their job,” “Work for little compensation or reward,” and “Selflessly serve others,” all represent the altruistic motivations expected of practicing nurses since the profession’s foundation. It is interesting that for nursing student identity, “Foundational values,” loaded submissive/passive items more strongly than altruistic items, while “Foundational values” for nursing faculty and practicing nurse loaded altruistic items more strongly than submissive/passive items. I believe this is likely due to the perception that students in general should be submissive/humble as learners.

The second factor, “Modern roles,” loaded the item “Lead others” (0.707) as well-defined for interpretation. “Be self-sufficient in their work” (0.536) loaded as practical for interpretation while “Think critically” (0.448), “Provide emotional support” (0.385), and “Not work as subordinates” (0.303) loaded as minimally acceptable for interpretation. Once again, the items loaded into this factor seem to align with the identity of practicing nurses. I contend that the items “Lead others” and “Be self-sufficient” are based on practicing nurse identity. Students, by their very nature, come to learn their profession in order to become self-sufficient and leaders in the profession. Because of this, these items really are describing the end goal of education, which

in this case is to train a practicing nurse who leads others and is self-sufficient.

The third factor, “Professional interactions,” loaded “Not give orders and directives without input” (0.623) as practical for interpretation. The item “Not be intimidating” (0.494) loaded as minimally acceptable for interpretation. Both of these items support the role of students who are generally expected to humbly receive directives. However, these items also align with the expectations for a novice, practicing nurse who has much to learn in the job setting.

The fourth factor, “Intrinsic motivation,” loaded “Feel their work is divine” (-0.932) as well suited for interpretation. The item “Be angelic in their work” (-0.639) loaded as practical for interpretation while “Feel called to their work” (-0.416) loaded as minimally acceptable for interpretation. These three items loaded identically for the nursing faculty archetypal identity and as I explained for the nursing faculty identity, the negative loading of these items, which counter expectations as documented in the nursing profession’s literature, provide evidence supporting the idea that the nursing student archetypal identity exists in an oppressed state.

Four factors extracted with Eigenvalues greater than one. “Foundational values,” with an Eigenvalue of 4.796, explained 28.213% of the variance. “Modern roles,” with an Eigenvalue of 2.291, explained 13.476% of the variation. “Professional interactions,” with an Eigenvalue of 1.570, explained 9.236% of the variation. “Intrinsic motivation,” with an Eigenvalue of 1.006, explained 5.916% of the variance. The four principle factors explained 56.841% of the total variance. Although below the 60% mark suggested by Hair et al. (2010) for EFA, I found the percentage of variation explained by the solution adequate for the purposes of my research.

The final four-factor model indicated a good fit for the data as the final pattern matrix contained no cross loading and created a parsimonious pattern matrix for interpretation.

Additionally, only 8% of the non-redundant residuals had absolute values greater than 0.05 (Appendix P). Finally, internal consistency for two factors were good; “Foundational values” generated a very good Cronbach’s alpha of 0.829 while “Intrinsic motivation” generated a respectable Cronbach’s alpha of 0.731. “Modern roles” generated a Cronbach’s alpha of 0.597 while “Professional interactions” generated a Cronbach’s alpha of 0.490. Both of which are considered unacceptable for internal consistency reliability. Dropping items during consistency testing provided no increased fit for overall model.

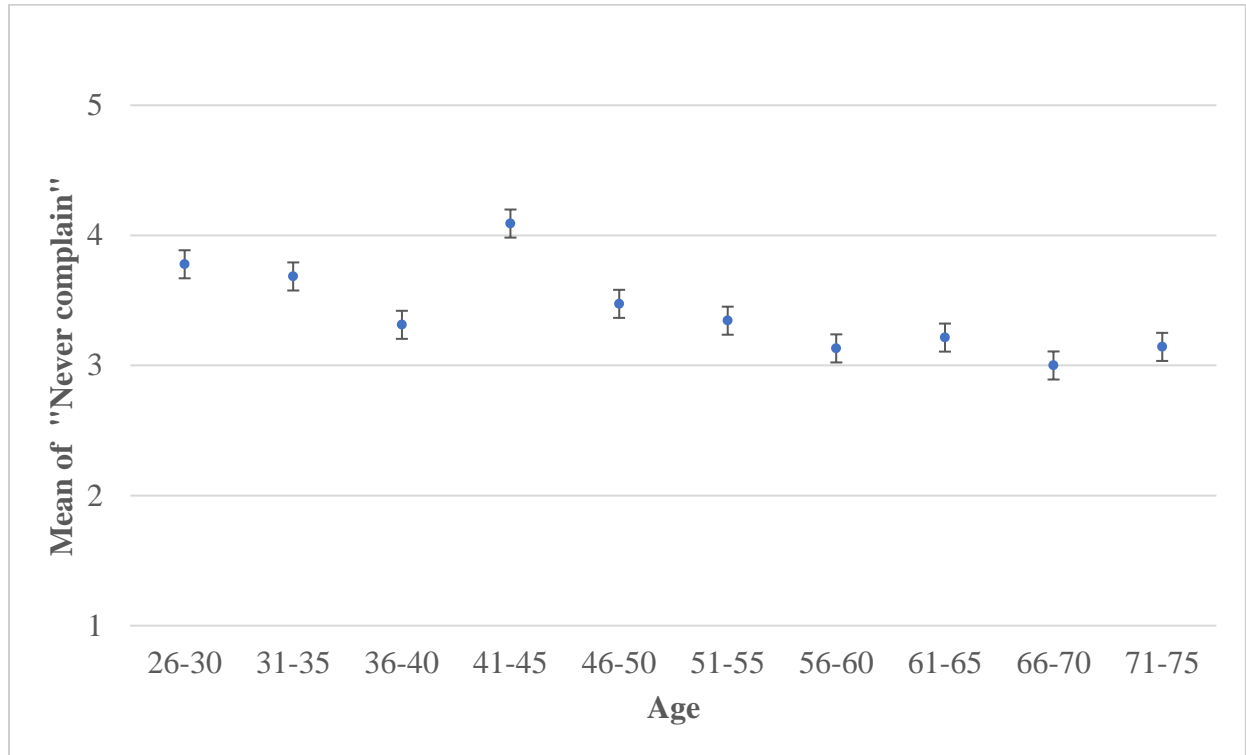
### ***Effects of Age on Nursing Student Identity Items***

Using an ANOVA test, I probed all items to determine if respondent’s age affected nursing student identity feedback. Age proved significant at the  $p < .05$  level for “Never get angry,”  $[F(9, 345) = 1.955, p = 0.044]$ , “Selflessly serve others,”  $[F(9, 345) = 2.176, p = 0.023]$ , and “Never complain”  $[F(9, 345) = 2.107, p = 0.028]$ . Age did not significantly affect any other loaded identity items.

Post hoc analysis using the Tukey HSD test determined that “Never get angry” was the only item to demonstrate statistically significant differences near one Likert unit. Respondents between the ages of 41-45 ranked “Never complain” higher ( $M = 4.09, SD = 0.765$ ) than 56-60 year-olds ( $M = 3.13, SD = 1.323, p = 0.017$ ), 61-65 year-olds ( $M = 3.21, SD = 1.250, p = 0.035$ ), and 66-70 year-olds ( $M = 3.00, SD = 1.354, p = 0.039$ ) (see Figure 9).

**Figure 9**

*Mean Responses for Nursing Student “Never Complain” by Age*



Again, I attribute the effect of age on “Never complain” to the general effect of experience on human expectations that change as one gains experience.

Post hoc comparisons using the Tukey HSD test detected statistically significant difference less than one Likert unit in the item “Selflessly serve” for the nursing student identity. Respondents between the ages of 41-45 ranked “Selflessly serve others” higher ( $M = 4.52$ ,  $SD = 0.566$ ) than 56-60 year-olds ( $M = 3.90$ ,  $SD = 1.044$ ,  $p = 0.046$ ). Turkey HSD indicated no significant differences between age groups for “Never get angry.”

#### ***Effects of Employment Status on Nursing Student Identity Items***

Independent T tests probing for the effect of employment status on nursing student identity items found employment status produced no statistically significant effects greater than

one Likert unit. However, effects less than one Likert unit were found for the items “Work for little compensation or reward,” and “Remain seen.” Respondents employed full-time ranked “Work for little compensation or reward,” higher ( $M = 3.52$ ,  $SD = 1.215$ ) than part-time respondents ( $M = 3.08$ ,  $SD = 1.412$ ),  $t(350) = 2.280$ ,  $p = 0.023$ . Cohen’s  $d$  (0.351) indicated that employment status had a minimal effect on “Work for little compensation or reward.” Respondents employed full-time ranked “Remain seen,” lower ( $M = 3.24$ ,  $SD = 1.308$ ) than part-time respondents ( $M = 3.67$ ,  $SD = 1.231$ ),  $t(350) = -2.181$ ,  $p = 0.030$ . Cohen’s  $d$  (-0.336) indicated that employment status had minimal effect on “Remain seen.” Employment status demonstrated no effect on other loaded identity items.

### ***Effects of Gender on Nursing Student Identity Items***

Independent T tests for the effect of gender on nursing student identity items found no statistically significant effects greater than one Likert unit. Effects less than one Likert unit were discovered for “Feel called to their work,” and “Feel their work is divine.” Female respondents ranked “Feel called to their work,” higher ( $M = 4.27$ ,  $SD = 0.791$ ) than males ( $M = 3.96$ ,  $SD = 0.825$ ),  $t(351) = 2.457$ ,  $p = 0.015$ . The effect size of gender on “Feel called to their work,” was small (Cohen’s  $d = 0.404$ ). Female respondents also ranked “Feel their work is divine,” higher ( $M = 3.29$ ,  $SD = 1.203$ ) than males ( $M = 2.86$ ,  $SD = 1.138$ ),  $t(351) = 2.216$ ,  $p = 0.027$ . The effect size of gender on “Feel their work is divine,” was small (Cohen’s  $d = 0.364$ ). Gender did not significantly affect any other loaded identity items.

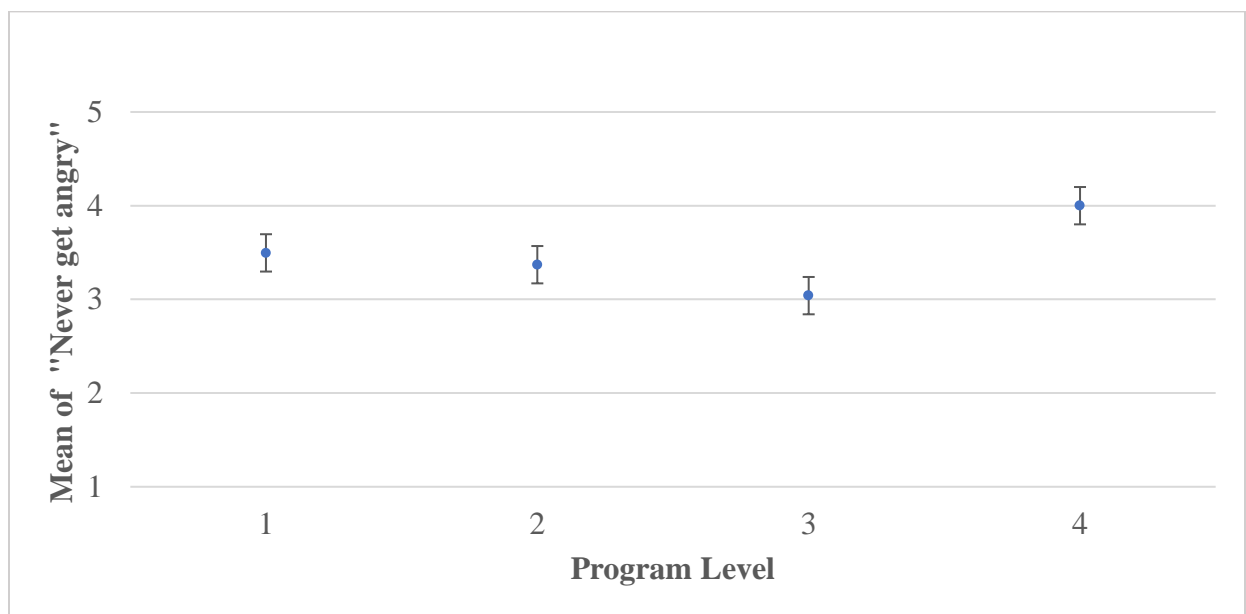
### ***Effects of Program Level on Nursing Student Identity Items***

Using an ANOVA test, I probed all items to determine if the level of program in which respondents taught affected nursing student identity feedback. Level of program significantly affected “Never get angry” [ $F(3, 353) = 3.689$ ,  $p = 0.012$ ]. The level of program in which respondents taught did not significantly affect any other loaded identity items.

Post hoc comparisons using the Tukey HSD test indicated that program level had statistically significant effects on “Never get angry” near one full Likert unit. Faculty teaching in master’s degree programs ranked “Never get angry” lower ( $M = 3.04$ ,  $SD = 1.330$ ) than faculty teaching in doctoral programs ( $M = 4.00$ ,  $SD = 1.085$ ,  $p = 0.020$ ) (see Figure 10).

**Figure 10**

*Mean Responses for Nursing Student “Never get Angry” by Program Level*



1 = Associate's, 2 = Bachelor's, 3 = Master's, 4 = Doctorate

Perhaps the difference between faculty teaching in master’s programs verses doctoral programs exists because of the autonomy provided to doctorate-level nurses. Those earning a nurse practitioner doctoral degree may work without the supervision of a physician. This position of independence may facilitate the belief that nurse practitioners have more of a right to get angry as they are the ones in charge.

### ***Effects of Race on Nursing Student Identity Items***

I probed the effect of race on identity items using an ANOVA test. A respondent's race demonstrated a significant effect on the item "Feel called to their work" [ $F(3, 342) = 2.834, p = 0.038$ ]. Race did not significantly affect any other loaded identity items.

Post hoc comparisons using Tukey HSD test found a respondent's race failed to produce a statistically significant effect on any items that exceeded one Likert unit. However, race produced an effect less than one Likert unit for the item "Feel called to their work." Faculty who identified as *White* ranked "Feel called to their work" higher ( $M = 4.24, SD = 0.786$ ) than faculty who identified as *Other* ( $M = 3.64, SD = 1.082, p = 0.029$ ).

### ***Effects of Years Taught on Nursing Student Identity Items***

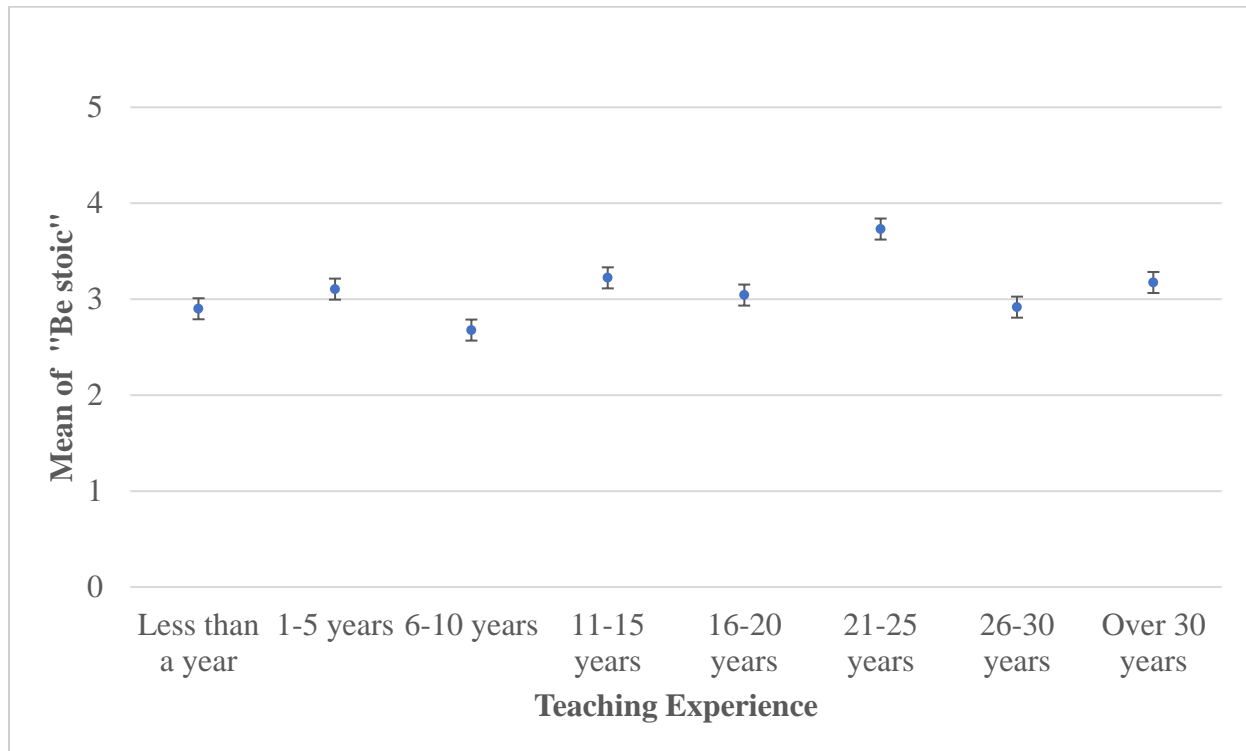
Finally, I investigated the effect of teaching experience (years taught) on nursing student identity items. An ANOVA test demonstrated that the years a faculty member has taught significantly affects the items "Feel their work is divine" [ $F(7, 349) = 2.131, p = 0.040$ ] and "Be stoic," [ $F(7, 349) = 2.721, p = 0.009$ ]. Years of teaching experience did not significantly affect any other loaded items.

Post hoc comparisons using the Tukey HSD test demonstrated that years of teaching experience created a statistically significant effect exceeding one Likert unit for the item "Be stoic." Faculty who have taught 6-10 years rank "Be stoic" lower ( $M = 2.86, SD = 1.090$ ) than faculty who have taught 21-25 years ( $M = 3.73, SD = 1.116, p = 0.002$ ) (see Figure 11).



**Figure 11**

*Mean Response for Nursing Student “Be Stoic” by Years of Experience*



I believe that the difference between faculty teaching 6-10 years and faculty teaching 21-25 years is likely due to generational expectations. Those with 21-25 years of teaching experience adopted professional nursing values at a time when nurses were expected to fill more passive roles. Those with 6-10 years of teaching experience adopted professional nursing values that have had more time to evolve and incorporate the more active, critical thinking expectations of nurses.

Tukey HSD testing found statistically significant effects less than one Likert unit for the item “Feel their work is divine.” Faculty who have taught 1-5 years rank “Feel their work is divine” higher ( $M = 3.30$ ,  $SD = 1.494$ ) than faculty who have taught over 30 years ( $M = 2.70$ ,  $SD = 1.259$ ,  $p = 0.038$ ).

## **Practicing Nurse Identity Item Factor Analysis**

Following the protocol outlined in my methods section, I analyzed the data for practicing nurse identity. In the final EFA for nursing faculty identity, 14 items produced a KMO measure of sampling adequacy of 0.856 while Bartlett's test of sphericity was significant ( $\chi^2(91) = 2090.257, p < 0.05$ ). The diagonals of the anti-image correlation matrix were greater than 0.5 and communalities all exceeded 0.2 (see Appendices Q & S). The final identity model captured 66.859% of the total variation (see Table 9). Of note, when determining rotation technique, oblique rotation failed to produce correlations between factors that exceeded 0.32. Despite this fact, I chose to keep oblique (oblim) rotation to maintain consistency in method of analysis with other identities and because oblique rotation techniques are recommended for non-normally distributed data (Arifin 2017).

The items "Not prioritize their own needs over others," "Question authority," "Not be intimidating," "Be self-sufficient," "Seek assistance with their work," and "Not give orders and directives without input" lacked any correlations of 0.30 or greater with other items and were therefore dropped from analysis. Additionally, "Not focus on financial aspects of their job," and "Be stoic," produced communalities less than 0.20. Because of this, I eliminated both items with low communalities from the analysis.

All 14 remaining practicing nurse identity items loaded into at least one of the four extracted factors (see Table 12). Three of the four factors generated were very similar to factors extracted for nursing faculty and nursing students. Because of the similarities, I labeled these three factors to match the labels of the other identities, "Foundational values" for the first factor, "Modern roles" for the second factor, and "Intrinsic motivation" for the third factor. Uniquely, EFA for practicing nurse placed three items that were included in "Intrinsic motivation" and "Foundational values" for nursing faculty and nursing student in their own factor. These three

items communicated practical motivations. Therefore, I named the fourth factor “Practical motivation.”

**Table 12**

*Pattern Matrix for Practicing Nurse Archetypal Identity*

	Factor			
	1	2	3	4
Work for little compensation or reward	.809			
Never complain	.762			
Never get angry	.759			
Not work as subordinates	-.670			
Not think about the financial rewards of their job	.669			
Remain seen	-.541			
Lead others		.880		
Think critically		.558		
Feel their work is divine			.880	
Be angelic in their work			.797	
Feel called to their work			.372	
Always care				-.785
Selflessly serve others	.308			-.533
Provide emotional support to others				-.513

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Similar to nursing faculty and nursing student identity models, “Foundational values” loaded with the most identity items. Seven of the 14 items loaded in “Foundational values.” The items “Work for little compensation or reward” (0.809), “Never complain” (0.762), and “Never get angry” (0.759), loaded with well-defined structure for interpretation. “Not work as subordinates” (0.670), “Not think about the financial rewards of their job” (0.669), and “Remain seen” (-0.541) all loaded as practically significant. “Selflessly serve others” (0.308) loaded as

minimally appropriate for interpretation.

The factor “Modern roles” loaded the item “Lead others” (0.880) with well-defined structure while “Think critically” (0.558) loaded as practically significant. Similar loading for this factor was demonstrated in the nursing faculty identity, nursing student identity, and physician identity.

The factor “Intrinsic motivation” loaded with three items that the nursing faculty, nursing student, and physician identities loaded. “Feel their work is divine” (0.880) and “Be angelic in their work” (0.797) loaded with well-defined structure for interpretation. “Feel called to their work” (0.372) loaded as minimally appropriate for interpretation. Oppression theory predicts that these items should load negatively similar to how they loaded in the nursing faculty and nursing student archetypal identities. The expectations that nursing faculty and nursing students *do not* feel their work is divine, *are not* angelic in their work, and *do not* feel called to their work all oppose the values that represent the core ideals of the nursing profession. As explained earlier, the loading of factors, in opposition to the traditional ideals of the nursing profession suggest that the nursing profession is rejecting some of its core values and at the same time embracing non-nursing ideals of an oppressive group. The archetypal identity for practicing nurse, however, failed to load items in “Intrinsic motivation” negatively. Perhaps the practicing nurse identity violated this pattern and loaded the three “Intrinsic motivation” items positively because practicing nurses are actually working in health care settings and are not heavily involved in educating nursing students. The fact that the physician archetypal identity demonstrated the same positive loading in “Intrinsic motivation” for the same three items lends some credence to this explanation. I believe that because the physician identity loaded the same three items positively for the same factor of “Intrinsic motivation,” practicing nurses are able to reembrace the

traditional ideals of their profession when they enter into the work place and at the same time align with the oppressive physician identity.

The fourth factor, “Practical motivation” represents a unique factor that was extracted only for practicing nurses. “Always care” (-0.785) loaded with well-defined structure for interpretation. The negative loading indicates that practicing nurses are expected to *not* always care. “Selflessly serve others” (-0.533) loaded as practical for interpretation and the negative loading communicates the expectation that practicing nurses should *not* selflessly serve others. Finally, “Provide emotional support to others” (-0.513) loaded as practical for interpretation as well and its negative loading indicates practicing nurses are *not* expected to provide emotional support to others. These negatively loading items for “Practical motivation” provide additional evidence supporting the hypothesis that the nursing profession is oppressed. The foundational ideals expressed for the nursing profession profess that nurses should always care, selflessly serve others, and provide emotional support to others. Yet these items are rejected in the archetypal identity of practicing nurse.

As seen in the archetypal identities of nursing faculty and nursing student, contradictory item loading (items loading positively into one factor and negatively into another factor) occurred for the identity of practicing nurse. Specifically, the item “Selflessly serve others” loaded positively for “Foundational values” in contrast to its negative loading for the “Practical motivation” factor. Once again, the data illustrates a nursing professional identity attempting to stay true to its founding values while also rejecting those same values in order to align with an oppressive identity. In short, practicing nurses are expected to selflessly serve others, as loaded in the “Foundation values” factor, and *not* selflessly serve others, as loaded in the “Practical motivation” factor. I believe that the “Practical motivation” factor not only provides evidence for

oppression but also captures the changing identity of the nursing profession. No longer is nursing considered a passive, altruistic, calling for to profession. Due to the changing scope of practice for the nursing profession, from nurturing, non-technical duties to critical thinking, technical duties, those entering the nursing profession may do so for the practical reasons of making a living.

Four latent factors extracted with Eigenvalues greater than one. “Foundational value,” with an Eigenvalue of 5.239, explained 37.418% of the variance. “Modern roles,” with an Eigenvalue of 2.018, explained 14.411% of the variation. “Intrinsic motivation,” with an Eigenvalue of 1.086, explained 7.760% of the variation. “Practical motivation,” with an Eigenvalue of 1.018, explained 7.270% of the variance. Together, the four principle factors explained 66.858% of the total variance.

The final four-factor model indicated a good fit for the data as the final pattern matrix contained no cross loading and created a parsimonious pattern matrix for interpretation. Only 7% of the non-redundant residuals had absolute values greater than 0.05 (Appendix Q). Additionally, internal consistency testing for “Foundational values” generated a very good Cronbach’s alpha of 0.870 while “Intrinsic motivation” generated a respectable Cronbach’s alpha of 0.756. “Practical motivation” generated a minimally acceptable Cronbach’s alpha of 0.672 while “Modern roles” generated a minimally acceptable Cronbach’s alpha of 0.650. Dropping items during consistency testing provided no benefits for factor one and two. Slight gains in consistency were evident if item “Feel called to their work” was dropped from factor three and item “Provide emotional support to others” was dropped from factor four. However, I chose not to drop either item because factor analysis without these two items provided only three extracted factors and created cross loadings between the factors.

### ***Effects of Age on Practicing Nurse Identity Items***

Using an ANOVA test, I probed all items to determine if the respondent's age affected practicing nurse identity feedback. Age proved significant at the  $p < .05$  level for "Be angelic in their work" [ $F(9, 345) = 2.067, p = 0.032$ ] and "Never complain" [ $F(9, 345) = 2.029, p = 0.035$ ]. Age did not significantly affect any other loaded identity items.

Post hoc comparisons using the Tukey HSD test, however, indicated no statistically significant differences between age groups for "Be angelic in their work" and "Never complain."

### ***Effects of Employment Status on Practicing Nurse Identity Items***

Independent T tests for the effect of employment status on practicing nurse identity items found that employment status failed to produce any statistically significant effects greater than one Likert unit. However, statistically significant effects of less than one Likert unit were found. Respondents employed full-time ranked "Lead others," lower ( $M = 4.41, SD = 0.844$ ) than part-time respondents ( $M = 4.63, SD = 0.528$ ),  $t(350) = -2.528, p = 0.013$ . Cohen's  $d$  ( $-0.281$ ) indicated that employment status had a minimal effect on "Lead others." Respondents employed full-time also ranked "Remain seen," lower ( $M = 3.52, SD = 1.156$ ) than part-time respondents ( $M = 3.90, SD = 1.046$ ),  $t(350) = -2.142, p = 0.033$ . Cohen's  $d$  ( $-0.330$ ) indicated that employment status had a minimal effect on "Remain seen." Employment status demonstrated no effect on all other loaded identity items.

### ***Effects of Gender on Practicing Nurse Identity items***

Independent T tests for the effect of gender on practicing nurse identity items found that gender failed to create statistically significant affects greater than one Likert unit. However, gender did produce significant effects less than one Likert unit for the items "Work for little compensation or reward" and "Lead others." Female respondents ranked "Work for little compensation or reward" higher ( $M = 3.65, SD = 1.306$ ) than males ( $M = 3.14, SD = 1.221$ ),

$t(351) = 2.362, p = 0.019$ . The effect size of gender on “Work for little compensation or reward,” was small (Cohen’s  $d = 0.388$ ). Female respondents also ranked “Lead others,” higher ( $M = 4.48, SD = 0.790$ ) than males ( $M = 4.19, SD = 0.833$ ),  $t(351) = 2.207, p = 0.028$ . The effect size of gender on “Lead others,” was small (Cohen’s  $d = 0.363$ ). Gender did not significantly affect any other loaded identity items.

### ***Effects of Program Level on Practicing Nurse Identity Items***

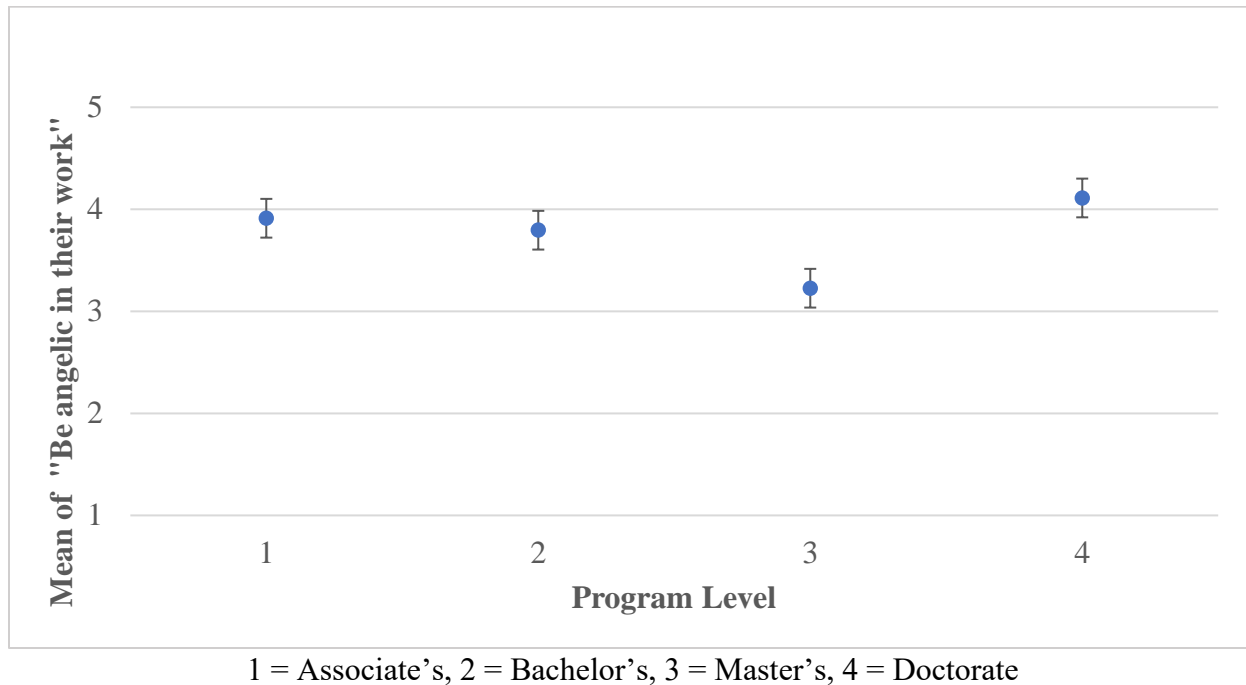
Using an ANOVA test, I probed all items to determine if the level of program in which respondents taught affected practicing nurse identity feedback. Level of program significantly affected “Be angelic in their work” [ $F(3, 353) = 6.035, p = 0.001$ ], “Never get angry” [ $F(3, 353) = 4.055, p = 0.007$ ], “Feel their work is divine” [ $F(3, 353) = 3.869, p = 0.010$ ], “Always care” [ $F(3, 353) = 2.740, p = 0.043$ ], “Selflessly serve others” [ $F(3, 353) = 2.022, p = 0.012$ ], and “Never complain” [ $F(3, 353) = 3.351, p = 0.019$ ]. The level of program in which respondents taught did not significantly affect any other loaded identity items.

Post hoc comparisons using the Tukey HSD tests indicated that statistically significant effects near one Likert unit only occurred for the item “Be angelic in their work.” Faculty teaching in master’s degree programs ranked “Be angelic in their work” lower ( $M = 3.23, SD = 1.371$ ) than faculty teaching in doctoral programs ( $M = 4.11, SD = 0.963, p = 0.030$ ) (see Figure 12).



**Figure 12**

*Mean Responses for Practicing Nurse “Be Angelic in Their Work” by Program Level*



Rationale for the difference between faculty teaching in master's programs and doctoral programs may once again exist because of the drastic change in work independence that occurs for nurses earning a nurse practitioner doctoral degree. But the fact that responses from programs below master's do not differ from the doctoral level undermines this explanation.

Tukey HSD tests found statistically significant effects less than one Likert unit for “Be angelic in their work,” “Never get angry,” “Feel their work is divine,” “Always care,” “Selflessly serve others,” and “Never complain.” Faculty teaching in associate's degree programs ranked “Be angelic in their work” higher ( $M = 3.91$ ,  $SD = 1.191$ ) than faculty teaching in master's degree programs ( $M = 3.23$ ,  $SD = 1.371$ ,  $p = 0.001$ ). Faculty teaching in bachelor's degree programs ranked “Be angelic in their work” higher ( $M = 3.80$ ,  $SD = 1.171$ ) than faculty teaching in master's degree programs ( $M = 3.23$ ,  $SD = 1.371$ ,  $p = 0.008$ ). Faculty teaching in associate's

degree programs ranked “Never get angry” higher ( $M = 4.08$ ,  $SD = 1.044$ ) than faculty teaching in master’s degree programs ( $M = 3.51$ ,  $SD = 1.399$ ,  $p = 0.004$ ). Faculty teaching in associate’s degree programs ranked “Feel their work is divine” higher ( $M = 3.75$ ,  $SD = 1.143$ ) than faculty teaching in master’s degree programs ( $M = 3.23$ ,  $SD = 1.290$ ,  $p = 0.010$ ). Faculty teaching in associate’s degree programs ranked “Always care” higher ( $M = 4.82$ ,  $SD = 0.484$ ) than faculty teaching in master’s degree programs ( $M = 4.61$ ,  $SD = 0.695$ ,  $p = 0.030$ ). Faculty teaching in associate’s degree programs ranked “Selflessly serve others” higher ( $M = 4.66$ ,  $SD = 0.635$ ) than faculty teaching in master’s degree programs ( $M = 4.32$ ,  $SD = 0.947$ ,  $p = 0.009$ ). Finally, faculty teaching in associate’s degree programs ranked “Never complain” higher ( $M = 3.97$ ,  $SD = 1.163$ ) than faculty teaching in master’s degree programs ( $m = 3.43$ ,  $SD = 1.185$ ,  $p = 0.011$ ).

#### ***Effects of Race on Practicing Nurse Identity Items***

I probed the effect of race on identity items using an ANOVA test. A respondent’s race demonstrated no statistically significant effects on practicing nurse identity items.

#### ***Effects of Years Taught on Practicing Nurse Identity Items***

Finally, I investigated the effects of teaching experience (years taught) on practicing nurse identity items. An ANOVA test demonstrated that the years a faculty member has taught significantly affects “Never get angry” [ $F(7, 349) = 2.520$ ,  $p = 0.015$ ], “Feel their work is divine” [ $F(7, 349) = 2.352$ ,  $p = 0.023$ ], “Always care” [ $F(7, 349) = 2.919$ ,  $p = 0.006$ ], and “Not work as subordinates” [ $F(7, 349) = 2.210$ ,  $p = 0.022$ ]. Years of teaching experience did not significantly affect any other loaded items.

Post hoc comparisons using the Tukey HSD test found that years of teaching experience failed to produce any statistically significant effects near one Likert unit for practicing nurse identity data. However, years of teaching experience demonstrated effects of less than one Likert unit for “Always care.” Faculty who have taught 21-25 years rank “Always care” lower ( $M =$

4.38, SD = 0.752) than faculty who have taught 1-4 years (M = 4.83, SD = 0.411, p = 0.005), lower than faculty who have taught 6-19 years (M = 4.82, SD = 0.414, p = 0.005), lower than faculty who have taught 16-20 years (M = 4.79, SD = 0.414, p = 0.039) and lower than faculty who have taught 26-30 years (M = 5.00, SD = 0.00, p = 0.020).

Post Hoc analysis using the Tukey HSD test found no significant differences between age groups for “Never get angry,” “Feel their work is divine,” and “Not work as subordinates.

### **Physician Identity Item Factor Analysis**

Following the protocol outline in my methods section, I analyzed the data for physician identity. In the final EFA for physician identity, 18 items produced a KMO measure of sampling adequacy of 0.778 while Bartlett’s test of sphericity was significant ( $\chi^2$  (153) = 1368.207, p < 0.05). The diagonals of the anti-image correlation matrix were greater than 0.5 and communalities all exceeded 0.2 (see Appendix R & S). The final identity solution captured 56.149% of the total variance (see Table 9).

The items “Not prioritize their own needs over others,” “Work for little compensation or rewards,” and “Question authority” lacked any correlations of 0.30 or greater with other items and were therefore dropped from factor analysis. To improve reliability of items captured by the second factor, I also dropped “Seek assistance with their work,” from my analysis.

All 18 physician identity items loaded into at least one of the five extracted factors (see Table 13). The first factor captured many of the same items capture by the “Intrinsic motivation” factor for the other identities. I therefore labeled the first factor “Intrinsic Motivations.” The second factor capture items describing the professional interactions of physicians in health care; similar to other archetypal identities, I named the second factor “Professional interactions.” The third factor captured items describing the role physicians fill in more modern health care settings;

similar to the other identities, I labeled the third factor “Modern roles.” The fourth factor uniquely captured items describing the mindset expected of physicians; I named the fourth factor “Professional mindset.” Finally, the fifth factor uniquely captured items that describe a physician’s organizational position in health care; I named the fifth factor “Organizational Position.”

**Table 13**

*Pattern Matrix for Physician Archetypal Identity*

	Factor				
	1	2	3	4	5
Feel their work is divine	.744				
Be angelic in their work	.616				
Selflessly serve others	.520				
Feel called to their work	.511				
Always care	.462				
Not be intimidating		-.633			
Not give orders and directives without input		-.533			
Be stoic		.486			
Provide emotional support to others		-.429			
Lead others			.634		
Think critically			.510		
Be self-sufficient in their work			.466		
Never get angry				.638	
Never complain				.541	
Not think about the financial rewards of their job				.449	
Not focus on financial aspects of their job				.367	
Not work as subordinates					.665
Remain seen					.566

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 14 iterations.

Even though the items used for factor analysis came from research describing the nursing profession, exploratory factor analysis successfully extracted five factors to describe physician

archetypal identity. Three of the five factors, “Intrinsic motivations,” “Professional interactions,” and “Modern roles” were extracted by other archetypal identities as well. “Professional mindset” and “Organizational positions” proved to be unique factors when compared to the other identities. The “Intrinsic motivation” factor loaded with five of the 19 identity items. “Feel their work is divine” (0.744) loaded with well-defined structure for interpretation. “Be angelic in their work” (0.616), “Selflessly serve others” (0.520), and “Feel called to their work” (0.511) loaded as practically significant for interpretation. “Always care” (0.462) loaded as minimally acceptable for interpretation. Interestingly, all five of the items loaded into the “Intrinsic motivation” factor for physician archetypal identity were also loaded into “Intrinsic motivation” for nursing faculty archetypal identity.

The factor “Professional interactions” loaded four identity items. “Not be intimidating” (-0.633) and “Not give orders and directives without input” (-0.533) loaded as practically significant for interpretation.” Of note, both of these factors loaded negatively meaning for this factor, physicians are expected *to be* intimidating and *to give* order and directives without input. “Be stoic” (0.486) and “Provide emotional support to others” (-0.429) all loaded as minimally acceptable for interpretation. Negative loading for “Provide emotional support to others” indicates that physicians are expected to *not* provide emotional support to others. Viewed together, the items that loaded into the “Professional interactions” factor describe identity expectations that could be considered autocratic and patriarchal; these expectations describe the traditional roles of physicians. I chose not to name this factor “Traditional roles” because the nursing faculty identity and the nursing student identity extracted a factor labeled “Traditional roles” and the items loaded here from physicians failed to represent the traditional roles of nursing faculty and nursing students. For example, the loading of the items “Not be

intimidating,” “Not give orders and directives without input,” and “Be stoic,” for the nursing faculty archetypal identity loaded in opposition to how they loaded for the physician identities. “Provide emotional support to others” and “Not give orders and directives without input” for the nursing student identities loaded in opposition to their loading for physicians. I find such oppositional loading further evidence that the nursing profession exists under the oppression of physicians. Nursing professional identities value items that are in direct opposition to items that support physician identity.

The “Modern roles” factor loaded three items. “Lead others” and “Think critically” loaded for all identities in this factor while “Be self-sufficient” loaded for the physician and nursing student identities. “Lead others” (0.634) and “Think critically” (0.510) loaded as practical for interpretation while “Be self-sufficient in their work” (0.466) loaded as minimally acceptable for interpretation.

The “Professional mindset” factor loaded four identity items and was unique to the physician archetypal identity. The item “Never get angry” (0.638) loaded as practical for interpretation, while all other factors, “Never complain” (0.541), “Not think about the financial reward of their job” (0.449), and “Not focus on financials aspects of their job” (0.453), all loaded as minimally acceptable for interpretation.

The final factor extracted for physician identity, “Organizational position” was also a unique factor for physician archetypal identity. Two items loaded into “Organizational position.” The item “Not work as subordinates” (0.665) loaded as well-defined for interpretation while “Remain seen” (0.566) loaded as practically significant for interpretation.

Five latent factors presented Eigenvalues greater than one. “Intrinsic motivations,” with an Eigenvalue of 3.745, explained 20.806% of the variance. “Professional interactions,” with an

Eigenvalue of 2.301, explained 12.785% of the variation. “Modern roles,” with an Eigenvalue of 1.587, explained 8.818% of the variation. “Professional mindset,” with an Eigenvalue of 1.348 explained 7.492% of the variance. “Organizational position,” with an Eigenvalue of 1.125, explained 6.248% of the variance. Together, the five principle factors explained 56.148% of the total variance. Once again, I determined this level of explanation appropriate for the purposes of my research.

The five-factor model indicated a good fit for the data as the final pattern matrix demonstrated parsimony and lacked cross loadings. Only 4% of the non-redundant residuals had absolute values greater than 0.05 (Appendix R). Additionally, internal consistency testing for “Intrinsic motivation” generated a respectable Cronbach’s alpha of 0.761. “Professional interactions” generated an undesirable Cronbach’s alpha of 0.612, “Modern roles” generated an unacceptable Cronbach’s alpha of 0.555, “Professional mindset” generated an unacceptable Cronbach’s alpha of 0.594, and “Organizational position” generated a unacceptable Cronbach’s alpha of 0.525. Dropping items during reliability testing only provided benefit to the second factor, “Professional interactions.” I therefore dropped the item “Seek assistance with their work” from my final analysis. The poorer internal consistency for physician identity is not surprising considering that the identity items I generated came from nursing literature with the intent to capture latent factors underlying nursing professional identities not physician.

### ***Effects of Age on Physician Identity Items***

Using an ANOVA test, I probed all items to determine if age affected identity feedback for physicians. Age proved significant at the  $p < .05$  level for “Selflessly serve others” [ $F(9, 345) = 2.195, p = 0.022$ ], “Never complain” [ $F(9, 345) = 2.050, p = 0.033$ ], and “Not be intimidating” [ $F(9, 345) = 2.228, p = 0.020$ ]. Age did not significantly affect any other loaded identity items.

Post hoc comparisons using the Tukey HSD test found no statistically significant effects near the level of one Likert unit for any items. However, age did show effects below one Likert unit for “Not be intimidating.” Respondents 51-55 year-olds ranked “Not be intimidating” lower ( $M = 2.08$ ,  $SD = 1.085$ ) than 61-65 year-olds ( $M = 2.86$ ,  $SD = 1.344$ ,  $p = 0.014$ ). Post hoc testing of the effects of age on “Selflessly serve others” and “Never complain” found no statistically significant differences between groups.

### ***Effects of Employment Status on Physician Identity Items***

Independent T tests for the effect of employment status on physician identity items found that employment status produced no statistically significant effects near one Likert unit for physician identity items. However, effects less than one Likert unit were found for the items “Feel called to their work” and “Provide emotional support to others.” Respondents employed full-time ranked “Feel called to their work” lower ( $M = 3.77$ ,  $SD = 1.035$ ) than part-time respondents ( $M = 4.2$ ,  $SD = 0.912$ ),  $t(352) = -2.352$ ,  $p = 0.006$ . Cohen’s  $d$  ( $-0.424$ ) indicated that employment status had a minimal effect on “Feel called to their work.” Respondents employed full-time also ranked “Provide emotional support for others,” lower ( $M = 2.88$ ,  $SD = 1.198$ ) than part-time respondents ( $M = 3.39$ ,  $SD = 1.222$ ),  $t(352) = -2.700$ ,  $p = 0.009$ . Cohen’s  $d$  ( $-0.422$ ) indicated that employment status had a minimal effect on “Provide emotional support for others.” Employment status demonstrated no effect on all other loaded identity items.

### ***Effects of Gender on Physician Identity Items***

Independent T tests for the effect of respondent gender on physician identity items found that gender had no statistically significant effects greater than one Likert unit on identity scores. Respondent gender did demonstrate effects less than one Likert unit for “Not work as subordinates.” Female respondents ranked “Not work as subordinates,” higher ( $M = 4.69$ ,  $SD =$



0.637) than males ( $M = 4.43$ ,  $SD = 0.801$ ),  $t(48.273) = 2.066$ ,  $p = 0.044$ . The effect size of gender on “Not work as subordinates” was small (Cohen’s  $d = 0.404$ ). Gender demonstrated no significant effects on any other loaded identity item.

### ***Effects of Program Level on Physician Identity Items***

Using an ANOVA test, I probed all items to determine if the level of program in which respondents taught affected physician identity feedback. Level of program significantly affected “Be angelic in their work” [ $F(3, 353) = 3.074$ ,  $p = 0.028$ ], and “Not work as subordinates” [ $F(3, 353) = 3.157$ ,  $p = 0.025$ ]. The level of program in which respondents taught did not significantly affect any other loaded identity items.

Post hoc comparisons using the Tukey HSD test indicated that program level had no statistically significant effects greater than one Likert unit on physician identity data. Tukey HSD testing, however, did find that program level affected “Be angelic in their work” and “Not work as subordinates” at a level less than one Likert unit. Faculty teaching in master’s degree programs ranked “Be angelic in their work” lower ( $M = 2.00$ ,  $SD = 1.090$ ) than faculty teaching in doctoral programs ( $M = 2.89$ ,  $SD = 1.410$ ,  $p = 0.021$ ). Faculty teaching in associate’s degree programs ranked “Not work as subordinates” higher ( $M = 4.80$ ,  $SD = 0.487$ ) than faculty teaching in bachelor’s degree programs ( $M = 4.57$ ,  $SD = 0.741$ ,  $p = 0.033$ ).

### ***Effects of Race on Physician Identity Items***

I probed the effect of race on physician identity items using an ANOVA test. Race demonstrated significant effects on “Be angelic in their work” [ $F(3, 342) = 7.524$ ,  $p = 0.000$ ], “Feel their work is divine” [ $F(3, 342) = 3.794$ ,  $p = 0.011$ ], “Always care” [ $F(3, 342) = 2.982$ ,  $p = 0.031$ ], “Selflessly serve others” [ $F(3, 342) = 3.412$ ,  $p = 0.018$ ], “Not think about financial aspects of their job” [ $F(3, 342) = 2.854$ ,  $p = 0.037$ ], and “Provide emotional support to others”

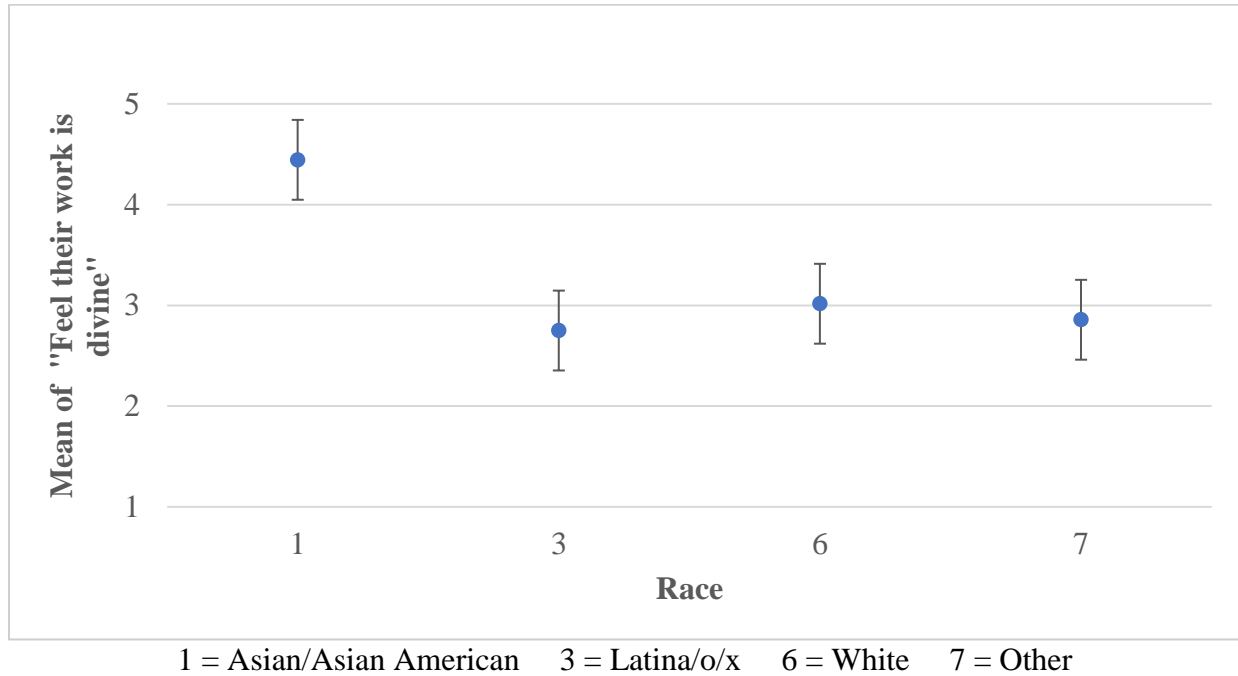
[F(3, 342) = 4.512, p = 0.004].

Post hoc analysis using Tukey HSD testing found that the race of respondents had an effect near or above one Likert unit for the items “Feel their work is divine,” “Always care,” “Selflessly serve others,” and “Provide emotional support to others.” Faculty who self-identify as Asian/Asian American rank “Feel their work is divine” higher (M = 4.44, SD = 0.726) than faculty who identify as Latina/o/x (M = 2.75, SD = 1.485, p = 0.018), White (M = 3.02, SD = 1.304, p = 0.007), and Other (M = 2.86, SD = 1.460, p = 0.024). Faculty who self-identify as Asian/Asian American also rank “Always care” higher (M = 4.56, SD = 0.726) than faculty who identify as Other (M = 3.64, SD = 1.170, p = 0.024). Faculty who self-identify as Asian/Asian American rank “Selflessly serve others” higher (M = 4.00, SD = 1.323) than faculty who identify as Latina/o/x (M = 2.25, SD = 1.215, p = 0.011). Finally, faculty who self-identify as Asian/Asian American rank “Provide emotional support to others” higher (M = 4.22, SD = 1.093) than faculty who identify as Latina/o/x (M = 2.45, SD = 0.900, p = 0.004), White (M = 2.95, SD = 1.202, p = 0.009), and Other (M = 2.64, SD = 1.277, p = 0.011) (see Figures 13-16).

I find it interesting that the Asian/Asian American race ranked all of the items listed above significantly higher than the other reported races. Such results support the conclusion that race likely has significant interactions with professional identities. These findings also support the prediction of identity theory that individuals hold multiply identities that self-organize into a hierarchy of relative importance (Stryker & Burke, 2000). In this case, I argue that the identity of Asian/Asian American has been prioritized over the physician archetypal identity, which explains why only Asian/Asian American respondents ranked certain items higher than other races. Further research into the archetypal identity of races could provide further insight to strengthen these conclusions.

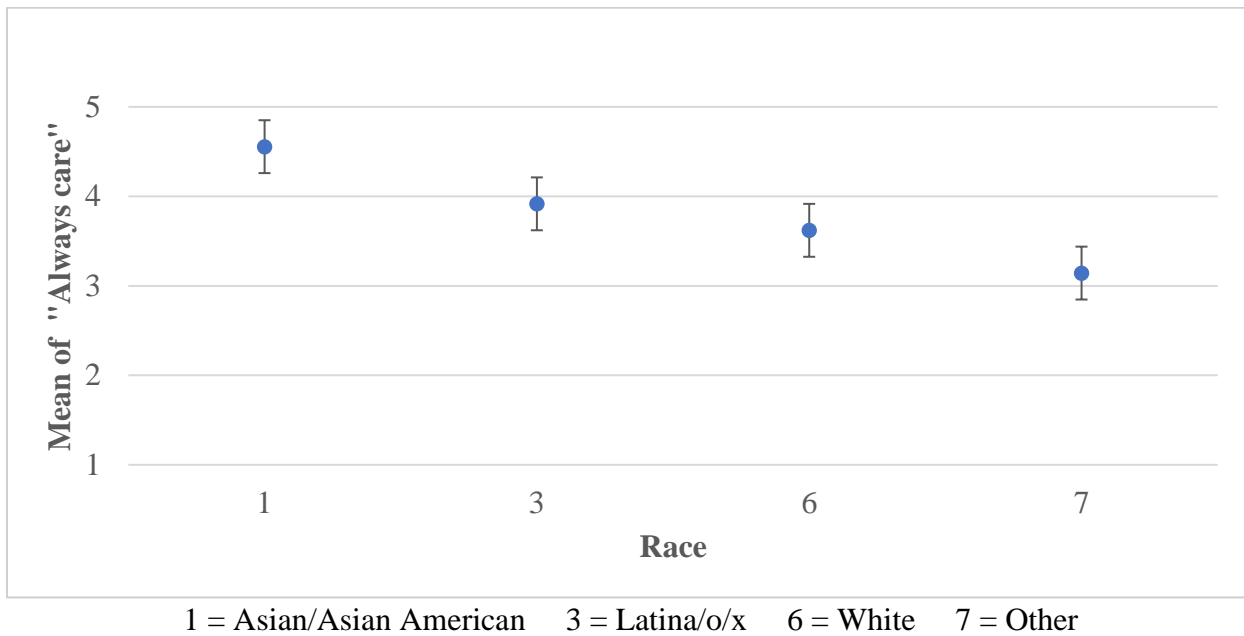
**Figure 13**

*Mean Responses for Physician “Feel Their Work is Divine” by Race*



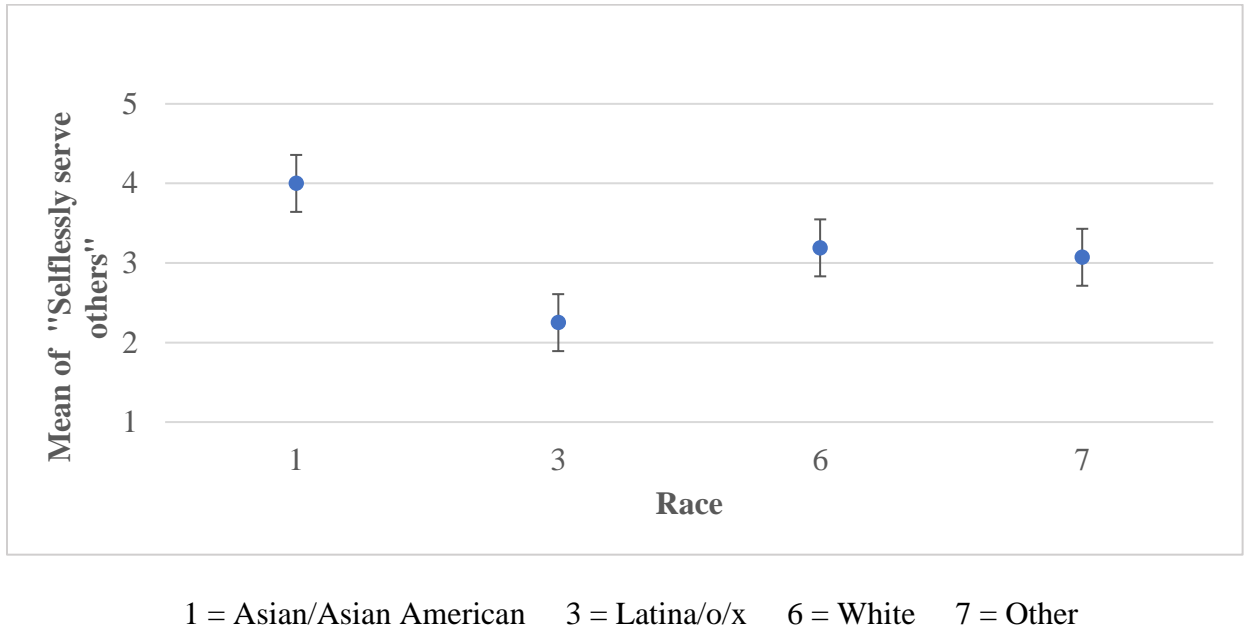
**Figure 14**

*Mean Responses for Physician “Always Care” by Race*



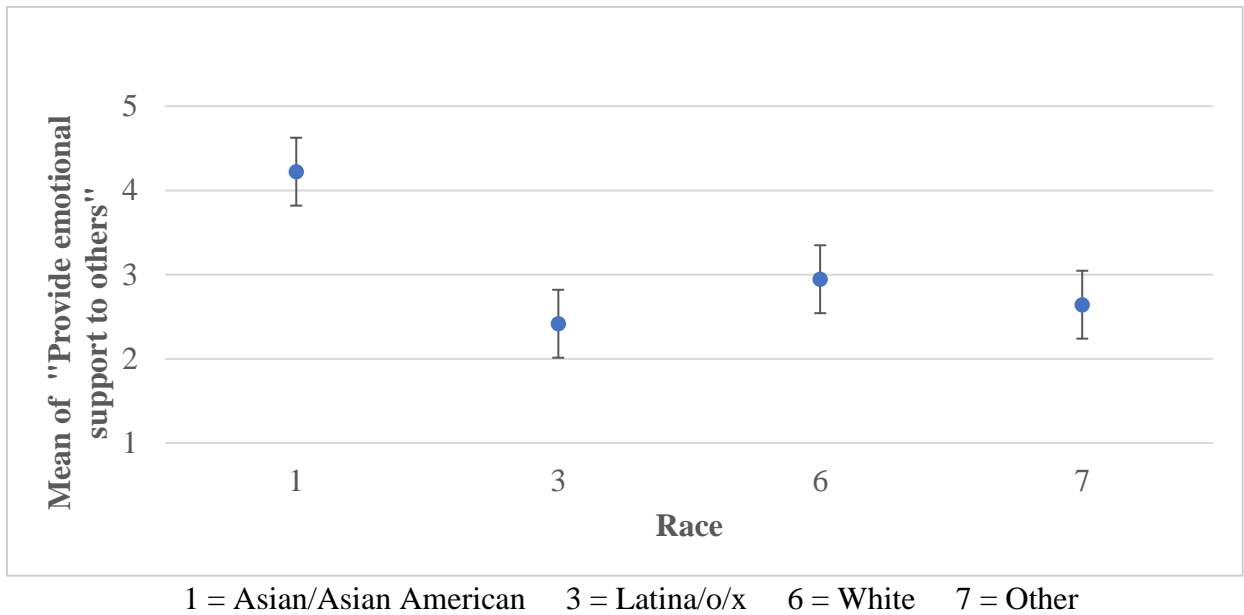
**Figure 15**

*Mean Responses for Physician “Selflessly Serve Others” by Race*



**Figure 16**

*Mean Responses for Physician “Provide Emotional Support to Others” by Race*



Post hoc comparisons using the Tukey HSD test demonstrated that race had a less than one Likert unit effect on “Be angelic in their work.” Faculty who self-identify as Asian/Asian American ranked “Be angelic in their work” higher ( $M = 4.00$ ,  $SD = 1.323$ ) than faculty who identify as Latina/o/x ( $M = 3.58$ ,  $SD = 1.084$ ,  $p = 0.000$ ), White ( $M = 3.85$ ,  $SD = 1.027$ ,  $p = 0.000$ ), and Other ( $M = 3.79$ ,  $SD = 1.051$ ,  $p = 0.001$ ). Post hoc comparison using the Tukey HSD test demonstrated no statistically significant differences for “Not think about the financial rewards of their job,” based on race.

### ***Effects of Years Taught on Physician Identity Items***

Finally, I investigated the effects of teaching experience (years taught) on physician identity items. An ANOVA test demonstrated that the years a faculty member has taught significantly affects feedback concerning “Be angelic in their work” [ $F(7, 349) = 2.115$ ,  $p = 0.041$ ], “Feel their work is divine” [ $F(7, 349) = 2.170$ ,  $p = 0.036$ ], and “Not work as subordinates” [ $F(7, 349) = 2.825$ ,  $p = 0.007$ ] for physician identity.

Post hoc comparisons using the Tukey HSD test found that years of teaching experience had no statistically significant effects exceeding one Likert unit on physician identity items. However, such analyses did show that years of teaching experience affected “Be angelic in their work,” “Feel their work is divine,” and “Not work as subordinates” at levels less than one Likert unit. Faculty who have taught 1-5 years rank “Be angelic in their work” higher ( $M = 2.64$ ,  $SD = 1.207$ ) than faculty who have taught 6-10 years ( $M = 2.09$ ,  $SD = 1.167$ ,  $p = 0.040$ ). Faculty who have taught 1-5 years rank “Feel their work is divine” higher ( $M = 3.33$ ,  $SD = 1.222$ ) than faculty who have taught over 30 years ( $M = 2.22$ ,  $SD = 1.166$ ,  $p = 0.008$ ). Finally, faculty who have taught 26-30 years rank “Not work as subordinates” lower ( $M = 4.00$ ,  $SD = 1.206$ ) than faculty who have taught 1-5 years ( $M = 4.66$ ,  $SD = 0.679$ ,  $p = 0.022$ ), lower than faculty who have taught 6-10 years ( $M = 4.71$ ,  $SD = 0.585$ ,  $p = 0.010$ ), lower than faculty who have taught

11-15 years ( $M = 4.68$ ,  $SD = 0.643$ ,  $p = 0.021$ ), and lower than faculty who have taught for 16-20 years ( $M = 4.85$ ,  $SD = 0.360$ ,  $p = 0.002$ ).

## **Chapter V**

### **Discussion**

Educating and training nurses is of vital importance to the United States (U.S.). As baby boomers age and require more medical services, the need for well-trained nurses will only increase and despite post-secondary's best efforts, researchers still predict a nursing shortage for the U.S. (Zhang et al., 2018). Because of the current shortage and predicted future shortage in the nursing workforce, the effectiveness of nursing faculty and higher education nursing programs becomes even more important.

Unfortunately, educational effectiveness in the field of nursing has been and continues to be plagued with issues stemming from incivility. Although researchers present different hypotheses concerning the etiology of incivility in nursing education (and the nursing profession), most agree that incivility is a major problem (Bartholomew, 2006; Clark, 2013; Joint Commission, 2016). Researchers have shown that incivility profoundly affects the emotional and physical health of individuals, the fiscal state of organizations, employee turnover, employee satisfaction, customer satisfaction, and worker productivity (Bartholomew, 2006; Clark, 2013; Joint Commission, 2016).

Researchers have also documented that incivility within nursing higher education leads to decreased self-esteem of student and faculty, loss of confidence in teaching abilities, significant time expenditures focused away from actual educational activities, decreased student satisfaction, faculty turnover, economic loss for institutions, and further acts of incivility (Clark & Springer, 2007b; Luparell, 2004; Luparell, 2007; Marchiondo et al., 2010; Weber Shandwick, 2011). Perhaps even more alarming, many researchers hypothesize that nursing education programs propagate the culture that promotes incivility, thereby allowing it to pass from one generation to the next (Bartholomew, 2006).

Understanding the etiology of incivility in nursing education, therefore, becomes a priority for higher education institutions in order to address and ameliorate the problems created by incivility in not only nursing education but also potentially nursing practice. Clark (2013) argues that incivility in nursing education exists in a large part due to the stress experienced by nursing instructors because of limited resources and pressures to publish. Clark et al. (2020) adds unclear role expectations, sense of entitlement/superiority, organizational volatility, and technological changes as sources of incivility as well.

Building on Clark's (2013) and Clark et al.'s (2020) work, my research followed Burke's (2009) general claims that individuals act uncivilly as a coping mechanism to deal with identity challenge. Burke bases his claims on identity theory, which proposes that individuals possess multiple identities/roles with unique meanings. Individuals work to maintain their identities and process external feedback to judge their success in so doing. When individuals experience the stress of identity challenge (feedback challenging their perceptions of self) they often cope by using uncivil behaviors (Burke & Stets, 2009). My research also begins to examine Roberts (1983) hypothesis that the nursing profession exists in an oppressed state and nurse professionals, therefore, engage in the uncivil behaviors predicted by oppression theory (Freire, 2005). Oppression theory predicts that nurses, as an oppressed group, will attempt to maintain their foundational identity while at the same time adopt identity traits of their oppressors. Attempts to maintain traits from oppositional identities lead to uncivil coping mechanisms as well (Freire, 2005).

My research investigates the efficacy of using identity theory and oppression theory as lenses through which one may begin to interpret and address incivility in nursing education. To do this, I measured archetypal nursing faculty identity alongside the counter archetypal identities



of nursing student, practicing nurse, and physician. Only by first understanding the archetypal identity of nursing faculty may one begin to evaluate the efficacy of using identity theory and oppression theory to view the phenomenon of incivility in nursing education. I successfully measured nursing faculty archetypal identity using a modified version of the Burke-Tully methodology (Burke & Stets, 2009).

According to my methodology, I employed a Likert-scale identity survey that solicited feedback from nursing faculty teaching in 171 post-secondary registered nursing programs in the Mountain State of the U.S. (Colorado, Arizona, Utah, Nevada, New Mexico, Idaho, Montana, and Wyoming). Of the 460 respondents, 357 faculty completed the entire survey. Because several of my research questions require demographic data, which was located at the end of the survey, I chose to analyze only the 357 surveys that were complete.

Analysis of the data from my identity survey supported my first hypothesis by successfully extracting factors that described archetypal identities for nursing faculty, nursing student, practicing nurse and physician. Using exploratory factor analysis (EFA) on the survey data, I successfully extracted latent factors for each archetypal identity. Extracted models for each identity were good fits for the data; the model for practicing nurse explained the most variance (66.859%), yet all models explained sufficient variance to justify good fit (above 56%) for the purpose of my research. The total variance captured for all identity models, however, was below the 60% mark recommended by Hair et al. (2010). I attribute this due to the complexity of studying social science concepts such as identity. Probing with additional identity items, especially items developing for each identity not just practicing nurse as done in this study, may improve overall model fits.

It is unsurprising that of all models, the model for archetypal practicing nurse explained the most variance because I culled the identity items used to measure archetypal identity from the research dealing mostly with characteristics of practicing nurses. Similarly, it is not surprising that the extracted model for physician captured the least amount of variance (56.148%), indicating poorest fit (although still acceptable for purposes of my research). I believe the fit for physician, the only archetypal identity not directly tied to nursing, would be improved if I had included physician specific characteristics in the identity survey. However, because my focus was on nursing identity, improving fit for the physician model was unnecessary for this research.

I believe that the three archetypal identities dealing directly with nursing (nursing faculty, nursing student, and practicing nurse) shared the most extracted factors in common because the identity survey items were tied most directly to nursing. Data from my analysis of nursing faculty identity did not completely support my hypothesis that the archetypal identity of nursing faculty would be the same as the identity of practicing nurse. Nor did the analysis completely support my hypothesis that nursing faculty archetypal identity would be different from nursing student and physician. Data, in fact, demonstrated that nursing faculty and nursing student generated the same four extracted factors of “Foundation values,” “Modern roles,” “Professional interactions,” and “Intrinsic motivation.” The archetypal identity for practicing nurse generated three of the factors that nursing faculty and nursing student identities generated; practicing nurse identity extracted “Foundational values,” “Modern roles,” and “Intrinsic motivation.” A fourth unique factor, “Practical motivation,” was extracted for practicing nurse. The archetypal identity for physicians extracted the most unique items, sharing only “Modern roles,” “Professional interactions,” and “Intrinsic motivation,” while extracting the unique factors of “Professional

mindset,” and “Organizational position.”

Even though all identities extracted some of the same factors, not all of the factors loaded the same identity items (see Appendix T). Based on the number of loaded items in common divided by the total of all loaded items for a factor, I was able to compute how similarly each factor solution loaded. If an item loaded in opposition, I counted it as a negatively loaded item. For the factor “Foundational values,” nursing faculty shared 66.7% of loaded items with nursing student, 75.0% with practicing nurse, and 0.0% with physician. For the factor of “Modern roles,” nursing faculty shared 40.0% of loaded items with nursing student, 100.0% with practicing nurse, and 66.7% with physician. For the factor of “Professional interactions,” nursing faculty shared 50.0% of loaded items with nursing student, 0.0% with practicing nurse, and -50.0% with physician. For the factor of “Intrinsic motivation,” nursing faculty shared 50.0% of loaded items with nursing student, -50.0% with practicing nurse, and -83.3% with physician (see Table 14).

**Table 14**

*Percentage of Shared Item Loading for All Archetypes with Nursing Faculty Factors*

	Nursing Faculty Foundational Values	Nursing Faculty Modern Roles	Nursing Faculty Professional Interactions	Nursing Faculty Intrinsic Motivations
Nursing Student Archetypal Identity	66.7%	40.0%	50.0%	50.0%
Practicing Nurse Archetypal Identity	75.0%	100.0%	0%	-50.0%
Physician Archetypal Identity	0.0%	66.7%	-50.0%	-83.3%

The archetypal identity for nursing faculty was closest to the identity of practicing nurse for the items loaded into the factors “Foundational values” and “Modern Roles,” and closest to the identity of nursing student for “Professional interactions” and “Intrinsic motivation.” The

strong relationship between nursing faculty and practicing nurse in “Foundational values” and “Modern roles” can be explained by the fact that nursing faculty must become practicing nurses before they may become nursing faculty. The lack of a strong relationship between nursing faculty and practicing nurse for “Professional interactions,” may exist because nursing faculty work largely with educational professionals instead of working with other health care providers in a health care setting; therefore, different professional interactions are expected.

Overall, the identity solution for nursing faculty was most similar to the identity solution for nursing student; nursing faculty and nursing student loaded with an overall similarity of 51.68%. The identity solution for nursing faculty and practicing nurse demonstrated an overall similarity of 32.25%. Finally, the identity solution for nursing faculty and physician had an overall similarity of -16.65%. I believe the nursing faculty and nursing student archetypal identities are most similar because they both function in the sphere of education. Additionally, nursing faculty, as teachers, expect nursing students to adopt their identity traits that they teach, model, and demonstrate.

The data largely supported my hypothesis that the demographics of respondents would not affect identity feedback. The majority of the identity items demonstrated no significant difference based on the respondent’s age, employment status, gender, level of program, race, or years taught. Additionally, most statistically significant effects from demographics proved to communicate negligible differences. For purposes of interpretation, I determined a meaningful effect to be a statistically significant result that represented near a full categorical difference on the Likert scale.

For the identity solution of nursing faculty, a respondent’s age had meaningful effects on three of 17 loaded items. In addition, a respondent’s years of teaching experience had a

meaningful effect on three of 17 loaded items. However, a respondent's employment status, gender, program level, and race fail to produce meaningful effects for any of the 17 loaded identity items in the nursing faculty archetypal identity solution.

For nursing student data, a respondent's age, program level of instruction, and years of teaching experience each meaningfully affected only one item out of 17 identity items. Employment status, gender, and race had no meaningful effects on all 17 loaded items.

For practicing nurse data, the program level in which respondents taught had a meaningful effect on only one out of 14 identity items. All other demographic categories had no meaningful effect on the 14 loaded identity items.

For physician data, only respondent race had a meaningful effect on identity feedback. Race affected four out of 18 loaded identity items. All other demographic categories had no meaningful effect on the 18 loaded identity items.

I find it interesting that two out of the three demographic categories producing meaningful effects for nursing faculty and nursing student identity items measure a respondent's experience. Age and years of teaching experience capture a respondent's maturity and familiarity with the nursing profession. Therefore, factors such as a person's naiveté/wisdom or novelty/burnout arguable sway expectations of identity. Younger, less experienced respondents provided feedback more strongly agreeing or disagreeing with an identity statement as compared to older, more experienced respondents or vice versa. This data indicates that experience/time can change an individual's view of archetypal identity.

Significant differences due to age/experience also support claims that the role of nursing has changed through time while many nursing professionals have not greatly modified their originally adopted archetypal identities. Essentially, experience, in some cases, does not change

identity expectations but rather, the change illustrated is the difference in identity expectations from one generation to the next. Each generation of professionals adopts the archetypal identity of their time and carry these expectations unchanging through their careers. In other words, I believe that the captured demographic differences are snap shots showing generational differences. For example, 26-30 year-old respondents feel “Not give orders and directives without input” is not as important for nursing faculty identities as respondents 66-70 years old respondents. Clearly, the expectation to “Not give orders and directives without input” aligns with the more passive/supportive role of the nursing profession formed at its inception. In contrast, 26-30 year-old respondents express a more modern view of the nursing profession by ranking “Not give orders and directives without input” less relevant to their archetypal identity. The more contemporary expectation of nursing requires a more independent role that interprets complex data, forms conclusions, implements appropriate action plans, and evaluates the effectiveness of chosen actions. If experience/wisdom created the difference between 26-30 year-olds and 66-70 year-olds, one would expect the opposite effects to manifest. Those with wisdom/experience, 66-70 year-olds, would be more willing to give orders and directives without input while those with less knowledge and experience would feel it more important not to give orders and directives without input.

Unlike the other archetypal identities, demographic effects not attributed to experience or generation did produce meaningful effects in physician identity items. Specifically, Asian/Asian American respondents indicated that physicians should demonstrate stronger commitment to the identity items “Feel their work is divine,” “Always care,” “Selflessly serve others,” and “Provide emotional support to others.” Together these differences capture a stronger expectation for the “Intrinsic motivation” factor of physician identity. Asian/Asian American respondents apparently

carry higher expectations for physicians when it comes to these identity items. In so much so that, Asian/Asian American respondents expressed firm agreement that physicians meet these standards while the other races expressed mostly indifference and some disagreement with these identity items. Understanding why Asian/Asian American respondents differ from the other races would require further research. However, this data supports identity theory's prediction that individuals possess multiple identities with varying salience (Stryker & Burke, 2000). It is clear the racial identity of Asian/Asian American is interacting with the professional identity of physician and that the identity of Asian/Asian American has salience in the interaction.

To summarize the demographic effects, age and experience had more effects upon the archetypal identity of nursing faculty and nursing student; program level had more effects upon nursing student and practicing nurse archetypal identities; race only had effects upon physician archetypal identity. Demographic effects on the archetypal identity for nursing faculty and nursing student (the educational sphere) are more closely related than the demographic effects seen in the archetypal practicing nurse and physician identities. Despite this, it is important to remember that the vast majority of items for all archetypal identities were unaffected by demographics. This illustrates the continuity and stability of these archetypal identities across multiple factors.

Of all the identities, I find it interesting that the practicing nurse archetypal identity was the least affected by demographics. The practicing nurse identity also generated the best fit for the identity items modeled. I think it would be interesting to research if identity models with better fits prove more resistant to demographic affects. I hypothesize that the more accurate the fit, the more stability and resistance to change one would find.

Analysis of the identity data that I collected supports Roberts (1983) hypothesis that the nursing profession exists in an oppressed state. As predicted by oppression theory, all the identities tied directly to the nursing profession (nursing faculty, nursing student, and practicing nurse) rejected core nursing values in their archetypal identity solutions. For example, archetypal identities for nursing faculty and nursing student loaded core nursing values all negatively in the “Intrinsic motivation” factor. The items loaded into “Intrinsic motivation” such as “Feel called to their work,” “Feel their work is divine,” and “Be angelic in their work” represent some of the traditional motivations of the nursing profession. In general, women were “called” to provide altruistic, benevolent care when the nursing profession was established. The fact that nursing faculty and nursing students exhibit negative loadings for these items, demonstrates core identity rejection.

Interestingly, many of the items that loaded negatively in “Intrinsic motivation,” for nursing faculty and nursing student archetypal identities loaded positively for physician and practicing nurse. Because of this, one could argue that the acceptance (positive loading) and rejection (negative loading) of these items depend on the differences between education and health care. Acceptance, therefore, occurs when actually caring for patients and rejection occurs when only learning to care for patients or teaching how to care for patients. I find this hypothesis unlikely considering that nursing students are training to become practicing nurses and provide direct patient care during their training. Nursing faculty, by default, have worked, and often continue to work as practicing nurses. Why would one only feel called to the work, after being engaged in it and not while studying to learn to work or teaching how to provide it? I think the difference between the educational setting and health care setting may be because nurses-in-training must profess that they are entering the profession for practical reasons (physician-like



reasons). In so doing, they bring legitimacy to their career choice according to the oppressor's values. I also suspect that nursing faculty, perhaps responding to the oppression of the nursing profession, teach students the need to be more physician-like in order to succeed. Additionally, nursing faculty justify their career choices by rejecting core nursing identity items and aligning with perceived values of their oppressor. Practicing nurses, on the other hand, need not justify their career choice because they are actively demonstrating their physician-like practicality daily.

Despite loading core nursing values positively in "Intrinsic motivation," practicing nurses also reject components of their core identity. The practicing nurse identity extracted the unique factor of "Practical motivation" in which the core values of "Always care" and "Selflessly serve others" are rejected. Once again, rejection serves to justify the practicality of the nursing profession by aligning with the oppressor's perceived identity.

I found additional data to support the conclusion that the nursing profession is oppressed in the contradictory loading patterns generated by all three nursing archetypal identities.

Oppression theory predicts that oppressed groups will attempt to reject core values while at the same time remain true to the same values (Freire, 2005). The archetypal identity solutions for nursing faculty, nursing student, and practicing nurse all demonstrated contradictory loading by loading the same identity items in multiple factors with oppositional loading values. For example, the archetypal identity for nursing faculty accepted and rejected the items "Selflessly serve others" and "Always care," while the archetypal identity for nursing students accepted and rejected the item "Not work as subordinates," and the archetypal identity for practicing nurse accepted and rejected the item "Selflessly serve others." As I have mentioned early, carrying such identities places nursing professionals in the untenable position of being and not being at the same time. One can imagine that incivility flourishes in such conditions, especially when

individuals desire and expect members of their profession to behave and value certain items but when to embrace an item and when to reject an item is impossible to determine.

The findings supporting the predictions of oppression theory, as explained above, indicate that the likely cause of incivility in nursing education is rooted in the dynamics explained by oppression theory. Moreover, considering the relationships between nursing education and practicing nursing, incivility in nursing health care settings is likely explained by oppression theory as well. Therefore, nursing professionals and educational leaders may look to identity theory and oppression theory as lenses through which incivility may be addressed.

Of note, I identified the profession of physician as the oppressor in my research because of the power differential that has historically existed between the two professions. In the health care setting, physicians typically have hierarchical/positional power over nurses. Additionally, the gender-based oppression creating from the foundation of nursing continues to exist, although the changing role expectations for nurses and the influx of more males into the profession have likely changed and continue to change the gender-based dynamics of nursing. The hierarchical power difference and gender-based role expectations lead to the state of oppression in the nursing profession (Bartholomew, 2006; Roberts, 1983). Labeling physicians as oppressive does not indicate that physicians necessarily engage with nurses in negatively, discriminatory ways. Further research could be conducted to investigate the range and types of oppression experienced by nursing professionals. Additionally, my claims that many conclusions from this study apply to practicing nurses could be strengthened if my identity survey was deployed to practicing nurses and physicians. One would expect that feedback from practicing nurses and physicians would provide for identity solutions similar to those found by my research.

## **Incivility Solutions**

To address the problems of incivility in nursing education, educational leaders must help nursing faculty and nursing students understand the social dynamics associated with oppression. Although challenging, nursing faculty must realize that their core identity is oppressed and attempting to stay true to core values while meeting the need to reject those values fosters incivility. Understanding the dynamics of oppression theory on people is also immensely valuable to academic leaders. Academic leaders need to understand that the nursing profession carries the weight of oppression. Because of this, academic leaders dealing with nursing faculty can gain insight into behaviors and reactions from nursing faculty and students that seem strange and defensive. For example, one should not be surprised that nursing faculty often analyze administrative decisions through the lens of “how does this policy take advantage of me?”

Although not a quick or easy fix, changing the core identity of the nursing profession to align more naturally with physicians could help alleviate the oppressed state of the nursing profession. Such a change likely happens as an identity adopts components of the oppressor and ceases to embrace more core/traditional identity items that conflict with the oppressor or recognizes that embracing both core and oppressor values is possible. Nursing faculty can play an integral role in addressing incivility by actively teaching nursing students that the latter is true; it is possible and appropriate to embrace both the core nurturing values of the nursing profession and the more historically practical values of physicians. They need not be mutually exclusive, as demonstrated by the physician archetypal identity embracing items captured in the “Intrinsic motivation” factor.

Additionally, I propose that teaching cognitive rehearsal techniques augmented with the social dynamics of oppression theory could help mitigate the daily effects of incivility in nursing education as well as assist in long-term identity change. Griffin (2004) documented the

effectiveness of teaching cognitive rehearsal as a mechanism to assist practicing nurses in avoiding the negative consequences of incivility. Other researchers have found cognitive rehearsal techniques assisted nurses in identifying and addressing incivility as well (Embree et al., 2013; Stagg et al., 2011, 2013). Cognitive rehearsal typically consists of didactic instruction dealing with common uncivil interactions, learning and practicing verbal phrases to address these uncivil interactions, and practice sessions to reinforce instruction and rehearsal (Griffin et al., 2014). I propose that teaching cognitive rehearsal participants the dynamics of oppression theory, as they relate to the nursing profession, could enrich the didactic instruction of cognitive rehearsal. Specifically, I believe that understanding the etiology of incivility in the nursing profession can bring empathy, patience, and grace to those who face it, while the verbal phrases and practice session give tangible skills to shield from and suppress uncivil actions. Nursing educators, therefore, should strongly consider integrating cognitive rehearsal with oppression theory in the nursing curriculum.

### **Research Implications for Higher Education**

In addition to providing valuable insights into the etiology of incivility in nursing education, this research also lays the groundwork to use identity theory to examine how professional subject expert identities (e.g. nurse, biologist, chemist, mathematician, etc.) interact with the professional identity of faculty/instructor and the identity of student. It is clear from this research that nursing faculty and nursing student strongly identify with the identity of the nursing expert (practicing nurse). One wonders how adopting an identity so strongly aligned with a subject matter expert assists or hinders instructional activities. I believe that many of the identity items valued by the practicing nurse archetypal identity actual impede instruction and learning. For example, one can easily imagine that the expectations for nursing faculty and students to

remain unseen, work as subordinates, and never complain, which align with the expectations for practicing nurses, do not promote educational excellence. How can a nursing faculty or student who strives to remain unseen, work as subordinates, and never complain maximize educational excellence? I argue that nursing faculty and students must at times be seen (ask questions), lead (guide students), and complain (question and voice concerns with educational activities and educational performance) for educational excellence to exist.

It is said that those who can't...teach, I propose that those who can...can't teach. Or more accurately, those who can may not teach well because of their subject matter expert identities. In other words, the subject matter expert identities our institutions of higher education establish in graduates may hinder the expert's ability to teach. Further research should be conducted to investigate if and how subject matter expert identities interact with the identities of faculty and student. If it is found that the subject matter identities taught and enforced by institutions of higher learning hinder instruction, we as leaders of higher education need to consider if faculty need to modify the salience of their instructor identity so that items favoring instructional excellence have greater influence than items carried by the expert's field, or how we as leaders in higher education can provide better support and professional development in order to increase the salience of the instructor identities at our institutions.

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### Appendix A: Likert Survey to Identity Items Relationships

<b>Nursing Identity Statements</b>	<b>Likert Questions Supporting Identity Statement</b>	<b>Likert Question Opposing Identity Statement</b>
A nurse is called to do God's work.	Be angelic in their work	
	Feel their work is divine	
	Feel called to their work	
A nurse never gets angry.	Never get angry	
A nurse always cares.	Provide emotional support to others	
	Always care	
A nurse selflessly serves others rejecting her own needs for little compensation or rewards.	Selflessly serve others	Prioritize their own needs over others
A nurse never complains.	Never complain	
A nurse only speaks when spoken to.		Question authority
A nurse is stoic.	Be stoic	
A nurse is approachable.		Be intimidating
A nurse avoids seeking assistance/help.	Be self-sufficient in their work	Seek assistance with their work
A nurse does not focuses on financials.	Work for little compensation or reward.	Focus on financial aspects of their job
	Not think about the financial rewards of their job	
A nurse is unseen.	Remain unseen	Lead others
	Work as subordinates	
A nurse gives orders and directives considering input.		Give orders and directives without input



A nurse deals with complex technologies and problems.	Think critically	
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## Appendix B: Online Identity Survey

English ▼

### Informed Consent

#### Welcome to the research study!

We are interested in understanding the professional identities of nursing faculty. You will be presented different roles (nursing faculty, nursing student, practicing nurse, and physician) and asked to rank each role based on several statements. Please indicate how well each statement describes the role based on your general impressions of **what society expects and not upon yourself or other specific individuals**. Please be assured that your responses will be kept completely confidential.

The survey should take you around ten minutes to complete. Your participation in this research is voluntary. You have the right to withdraw at any point during the survey, for any reason, and without any prejudice. Those completing the survey may enter a raffle for one of three \$50 Amazon gift cards. If you would like to contact the Principal Investigator in the study to discuss this research, please e-mail Jayson Lloyd, [lloyjays@isu.edu](mailto:lloyjays@isu.edu).

By clicking the button below, you acknowledge that your participation in the survey is voluntary, you are 18 years of age, and you are aware that you may choose to terminate your participation in the survey at any time and for any reason.

Please note that this survey will be best displayed on a laptop or desktop computer.

Some features may be less compatible for use on a mobile device.

## Identity Survey Questions

In general, society expects **nursing faculty** to...

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
provide emotional support to others					
be angelic in their work					
always care be intimidating					
seek assistance with their work					
feel their work is divine					
feel called to their work					
work for little compensation or reward					
be stoic					
give orders and directives without input					
selflessly serve others					
question authority					
remain unseen					
never complain					

think critically					
work as subordinates					
be self-sufficient in their work					
not think about the financial rewards of their job					
lead others					
never get angry					
prioritize their own needs over others					
focus on financial aspects of their job					

In general, society expects **nursing students** to...

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
provide emotional support to others					
be angelic in their work					
always care be intimidating					
seek assistance with their work					

feel their work is divine					
feel called to their work					
work for little compensation or reward					
be stoic					
give orders and directives without input					
selflessly serve others					
question authority					
remain unseen					
never complain					
think critically					
work as subordinates					
be self-sufficient in their work					
not think about the financial rewards of their job					
lead others					
never get angry					
prioritize their own needs over others					

focus on financial aspects of their job					
--	--	--	--	--	--

In general, society expects **practicing nurses** to...

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
provide emotional support to others					
be angelic in their work					
always care be intimidating					
seek assistance with their work					
feel their work is divine					
feel called to their work					
work for little compensation or reward					
be stoic					
give orders and directives without input					
selflessly serve others					
question authority					

remain unseen					
never complain					
think critically					
work as subordinates					
be self-sufficient in their work					
not think about the financial rewards of their job					
lead others					
never get angry					
prioritize their own needs over others					
focus on financial aspects of their job					

In general, society expects **physicians** to...

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
provide emotional support to others					
be angelic in their work					
always care be intimidating					

seek assistance with their work					
feel their work is divine					
feel called to their work					
work for little compensation or reward					
be stoic					
give orders and directives without input					
selflessly serve others					
question authority					
remain unseen					
never complain					
think critically					
work as subordinates					
be self-sufficient in their work					
not think about the financial rewards of their job					
lead others					
never get angry					



prioritize their own needs over others					
focus on financial aspects of their job					

In what type of nursing program have you taught? Choose all that apply.

- ☐ Associate's Degree
- ☐ Bachelor's Degree
- ☐ Master's Degree
- ☐ Doctoral Degree

What is your current employment status as a nursing faculty?

- ☐ Full-time
- ☐ Part-time
- ☐ Not currently working as nursing faculty

What is your age?

- ☐ 20-25
- ☐ 26-30
- ☐ 31-35
- ☐ 36-40
- ☐ 41-45
- ☐ 46-50
- ☐ 51-55
- ☐ 56-60
- ☐ 61-65
- ☐ 66-70 71-
- ☐ 75 over 75

What is your race/ethnicity? Select all that apply.

- ☐ Asian/Asian American
- ☐ Black/African American
- ☐ Latina/o/x
- ☐ Native American
- ☐ Native Hawaiian or other Pacific Islander
- ☐ White
- ☐ Other

What is your gender?

- ☐ Female
- ☐ Male
- ☐ Non-binary
- ☐ Prefer not to say

What is the highest degree you have obtained?

- ☐ Associate's Degree
- ☐ Bachelor's Degree
- ☐ Master's Degree
- ☐ Doctoral Degree

How long have you taught in nursing programs?

- ☐ Less than a year
- ☐ 1-5 years
- ☐ 6-10 years
- ☐ 11-15 years
- ☐ 16-20 years
- ☐ 21-25 years
- ☐ 26-30 years
- ☐ Over 30 years

How long have you been in your current teaching position?

- ☐ Less than a year
- ☐ 1-5 years
- ☐ 6-10 years
- ☐ 11-15 years
- ☐ 16-20 years
- ☐ 21-25 years
- ☐ 26-30 years
- ☐ Over 30 years
- ☐ Not currently teaching

What is your yearly salary range for teaching?

- ☐ Less than \$20,000
- ☐ \$20,000-\$29,999
- ☐ \$30,000-\$39,999
- ☐ \$40,000-\$49,999
- ☐ \$50,000-\$59,999
- ☐ \$60,000-\$69,999
- ☐ \$70,000-\$79,999
- ☐ \$80,000-\$89,999
- ☐ \$90,000-\$99,999
- ☐ Over \$100,000

Would you like to enter a raffle for the chance to win a \$50 Amazon gift card?

- ☐ Yes
- ☐ No

## **Appendix C: Email Notification of Upcoming Online Survey – First Email**

Hello,

You are receiving this email because you have been identified as an instructor in a pre-licensure registered nursing program. Because of your knowledge and experience, you will be receiving invitations to take part in an online survey supporting a research study titled “Professional Nursing Identities.” This study is being conducted by Jayson Lloyd, a graduate student in Idaho State University’s Higher Education Doctoral Program.

The purpose of this survey is to investigate the perceptions of nursing faculty concerning their professional identity in general. Completing the entire survey will take you approximately ten minutes. Your participation is entirely voluntary and you can withdraw from the survey at any time. You may also skip any question. Your answers will be kept confidential and will not be disclosed with individual identifiers. There is minimal risk associated with participation in this survey. Researchers will use your responses to help improve the working environment of nursing faculty. Participants who complete the survey may enter in a drawing for one of three \$50 Amazon gift cards.

The survey has been approved and is being conducted in accordance with the Idaho State University’s Human Subjects Committee.

**To participate, please click on the following link:**

[https://isu.co1.qualtrics.com/jfe/form/SV\\_af4zzf7k1Z6Lvfl](https://isu.co1.qualtrics.com/jfe/form/SV_af4zzf7k1Z6Lvfl)

If you have any questions about this survey, please contact: Jayson Lloyd, [lloydjays@isu.edu](mailto:lloydjays@isu.edu).

#### **Appendix D: Email Invitation to Online Survey – Second Email**

Hello,

You are receiving this email because you have been identified as an instructor in a pre-licensure registered nursing program. If you have already participated in this research, thanks, you need not respond again. If you have yet to participate, please consider taking the online survey linked below. Your knowledge and experience are valuable to the research study titled “Professional Nursing Identities.” This study is being conducted by Jayson Lloyd, a graduate student in Idaho State University’s Higher Leadership Doctoral Program.

The purpose of this survey is to investigate the perceptions of nursing faculty concerning their professional identity in general. Completing the entire survey will take you approximately ten minutes. Your participation is entirely voluntary and you can withdraw from the survey at any time. You may also skip any question. Your answers will be kept confidential and will not be disclosed with individual identifiers. There is minimal risk associated with participation in this survey. Researchers will use your responses to help improve the working environment of nursing faculty. Participants who complete the survey may enter in a drawing for a \$50 Amazon gift card.

The survey has been approved and is being conducted in accordance with the Idaho State University’s Human Subjects Committee.

If you have any questions about this survey, please contact: Jayson Lloyd, [lloydjays@isu.edu](mailto:lloydjays@isu.edu).

**Follow this link to the Survey:**

[Take the Survey](#)

Or copy and paste the URL below into your internet browser:

[https://isu.co1.qualtrics.com/jfe/form/SV\\_af4zzf7k1Z6Lvfl?Q\\_DL=HDHPqHRZTEQhBTC\\_af4zzf7k1Z6Lvfl\\_MLRP\\_cu3IqarvJNwsr7n&Q\\_CHL=email](https://isu.co1.qualtrics.com/jfe/form/SV_af4zzf7k1Z6Lvfl?Q_DL=HDHPqHRZTEQhBTC_af4zzf7k1Z6Lvfl_MLRP_cu3IqarvJNwsr7n&Q_CHL=email)

Follow the link to opt out of future emails:

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## **Appendix E: Follow-up Email Prompting Participation in Online Survey – Third Email**

Hello nursing instructors,

As a final plea...because of your knowledge and experience, please consider participating in an online survey supporting a research study titled “Professional Nursing Identities.” This study is being conducted by Jayson Lloyd, a graduate student in Idaho State University’s Higher Leadership Doctoral Program. If you have already participated in this research, thanks, you need not respond again.

The purpose of this survey is to investigate the perceptions of nursing faculty concerning their professional identity in general. Completing the entire survey will take you approximately ten minutes. Your participation is entirely voluntary and you can withdraw from the survey at any time. You may also skip any question. Your answers will be kept confidential and will not be disclosed with individual identifiers. There is minimal risk associated with participation in this survey. Researchers will use your responses to help improve the working environment of nursing faculty. Participants who complete the survey may enter in a drawing for a \$50 Amazon gift card.

The survey has been approved and is being conducted in accordance with the Idaho State University’s Human Subjects Committee.

If you have any questions about this survey, please contact: Jayson Lloyd, [lloydjays@isu.edu](mailto:lloydjays@isu.edu).



**Follow this link to the Survey:**

[Take the Survey](#)

Or copy and paste the URL below into your internet browser:

[https://isu.co1.qualtrics.com/jfe/form/SV\\_af4zzf7k1Z6Lvfl?Q\\_DL=Dm3549ei8fgTsew\\_af4zzf7k1Z6Lvfl\\_MLRP\\_1OhtEeLsao32QTP&Q\\_CHL=email](https://isu.co1.qualtrics.com/jfe/form/SV_af4zzf7k1Z6Lvfl?Q_DL=Dm3549ei8fgTsew_af4zzf7k1Z6Lvfl_MLRP_1OhtEeLsao32QTP&Q_CHL=email)

Follow the link to opt out of future emails:

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## Appendix F: Nursing Faculty Identity Items Descriptive Statistics

			Statistic	Std. Error
Feel called to their work	Mean		4.17	0.046
	95% Confidence Interval for Mean	Lower Bound	4.08	
		Upper Bound	4.25	
	5% Trimmed Mean		4.24	
	Median		4.00	
	Variance		0.739	
	Std. Deviation		0.860	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-1.018	0.129
	Kurtosis		1.097	0.257
Be angelic in their work	Mean		3.26	0.066
	95% Confidence Interval for Mean	Lower Bound	3.13	
		Upper Bound	3.39	
	5% Trimmed Mean		3.29	
	Median		3.00	
	Variance		1.554	
	Std. Deviation		1.247	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.335	0.129
	Kurtosis		-0.882	0.257
Never get angry	Mean		3.61	0.063
	95% Confidence Interval for Mean	Lower Bound	3.48	
		Upper Bound	3.73	
	5% Trimmed Mean		3.68	

	Median		4.00	
	Variance		1.413	
	Std. Deviation		1.189	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.596	0.129
	Kurtosis		-0.644	0.257
Feel their work is divine	Mean		2.96	0.063
	95% Confidence Interval for Mean	Lower Bound	2.83	
		Upper Bound	3.08	
	5% Trimmed Mean		2.95	
	Median		3.00	
	Variance		1.425	
	Std. Deviation		1.194	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.013	0.129
	Kurtosis		-0.836	0.257
Always care	Mean		4.57	0.034
	95% Confidence Interval for Mean	Lower Bound	4.50	
		Upper Bound	4.64	
	5% Trimmed Mean		4.64	
	Median		5.00	
	Variance		0.415	
	Std. Deviation		0.644	
	Minimum		2	
	Maximum		5	
	Range		3	
	Interquartile Range		1	
	Skewness		-1.401	0.129
	Kurtosis		1.571	0.257
Selflessly serve others	Mean		4.20	0.052

	95% Confidence Interval for Mean	Lower Bound	4.10	
		Upper Bound	4.30	
	5% Trimmed Mean		4.30	
	Median		4.00	
	Variance		0.958	
	Std. Deviation		0.979	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-1.421	0.129
	Kurtosis		1.762	0.257
Not prioritize their own needs over others	Mean		3.93	0.066
	95% Confidence Interval for Mean	Lower Bound	3.80	
		Upper Bound	4.06	
	5% Trimmed Mean		4.03	
	Median		4.00	
	Variance		1.551	
	Std. Deviation		1.245	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-1.064	0.129
	Kurtosis		0.054	0.257
Work for little compensation or reward	Mean		3.60	0.069
	95% Confidence Interval for Mean	Lower Bound	3.46	
		Upper Bound	3.73	
	5% Trimmed Mean		3.66	
	Median		4.00	
	Variance		1.696	
	Std. Deviation		1.302	
	Minimum		1	
	Maximum		5	

	Range		4	
	Interquartile Range		2	
	Skewness		-0.662	0.129
	Kurtosis		-0.743	0.257
Never complain	Mean		3.57	0.063
	95% Confidence Interval for Mean	Lower Bound	3.45	
		Upper Bound	3.70	
	5% Trimmed Mean		3.64	
	Median		4.00	
	Variance		1.414	
	Std. Deviation		1.189	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-0.672	0.129
	Kurtosis		-0.469	0.257
Not work as subordinates	Mean		3.14	0.069
	95% Confidence Interval for Mean	Lower Bound	3.01	
		Upper Bound	3.28	
	5% Trimmed Mean		3.16	
	Median		3.00	
	Variance		1.679	
	Std. Deviation		1.296	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.026	0.129
	Kurtosis		-1.198	0.257
Lead others	Mean		4.43	0.043
	95% Confidence Interval for Mean	Lower Bound	4.35	
		Upper Bound	4.52	
	5% Trimmed Mean		4.54	

	Median		5.00	
	Variance		0.667	
	Std. Deviation		0.817	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-1.752	0.129
	Kurtosis		3.504	0.257
Question authority	Mean		2.58	0.054
	95% Confidence Interval for Mean	Lower Bound	2.48	
		Upper Bound	2.69	
	5% Trimmed Mean		2.57	
	Median		2.00	
	Variance		1.047	
	Std. Deviation		1.023	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		0.242	0.129
	Kurtosis		-0.724	0.257
Be stoic	Mean		3.35	0.065
	95% Confidence Interval for Mean	Lower Bound	3.23	
		Upper Bound	3.48	
	5% Trimmed Mean		3.39	
	Median		4.00	
	Variance		1.493	
	Std. Deviation		1.222	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.394	0.129
	Kurtosis		-0.821	0.257
Not be intimidating	Mean		3.64	0.065

	95% Confidence Interval for Mean	Lower Bound	3.51	
		Upper Bound	3.76	
	5% Trimmed Mean		3.69	
	Median		4.00	
	Variance		1.502	
	Std. Deviation		1.226	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.446	0.129
	Kurtosis		-1.046	0.257
Be self-sufficient in their work	Mean		4.38	0.042
	95% Confidence Interval for Mean	Lower Bound	4.29	
		Upper Bound	4.46	
	5% Trimmed Mean		4.46	
	Median		5.00	
	Variance		0.617	
	Std. Deviation		0.786	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-1.295	0.129
	Kurtosis		1.587	0.257
Seek assistance with their work	Mean		2.83	0.056
	95% Confidence Interval for Mean	Lower Bound	2.72	
		Upper Bound	2.94	
	5% Trimmed Mean		2.81	
	Median		3.00	
	Variance		1.108	
	Std. Deviation		1.053	
	Minimum		1	
	Maximum		5	

	Range		4	
	Interquartile Range		2	
	Skewness		0.041	0.129
	Kurtosis		-0.683	0.257
Not Focus on financial aspects of their job	Mean		3.95	0.052
	95% Confidence Interval for Mean	Lower Bound	3.84	
		Upper Bound	4.05	
	5% Trimmed Mean		4.02	
	Median		4.00	
	Variance		0.977	
	Std. Deviation		0.989	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.840	0.129
	Kurtosis		0.257	0.257
Not think about the financial rewards of their job	Mean		3.82	0.062
	95% Confidence Interval for Mean	Lower Bound	3.70	
		Upper Bound	3.94	
	5% Trimmed Mean		3.91	
	Median		4.00	
	Variance		1.374	
	Std. Deviation		1.172	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.862	0.129
	Kurtosis		-0.233	0.257
Remain seen	Mean		3.57	0.061
	95% Confidence Interval for Mean	Lower Bound	3.45	
		Upper Bound	3.69	
	5% Trimmed Mean		3.62	



	Median		4.00	
	Variance		1.331	
	Std. Deviation		1.154	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.366	0.129
	Kurtosis		-0.826	0.257
	Mean		3.71	0.057
Not give orders and directives without input	95% Confidence Interval for Mean	Lower Bound	3.60	
		Upper Bound	3.82	
	5% Trimmed Mean		3.76	
	Median		4.00	
	Variance		1.151	
	Std. Deviation		1.073	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.593	0.129
	Kurtosis		-0.414	0.257
	Mean		4.51	0.037
	95% Confidence Interval for Mean	Lower Bound	4.43	
		Upper Bound	4.58	
Provide emotional support to others	5% Trimmed Mean		4.59	
	Median		5.00	
	Variance		0.487	
	Std. Deviation		0.698	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-1.773	0.129
	Kurtosis		4.481	0.257
	Mean		4.59	0.042
Think critically	Mean		4.59	0.042

	95% Confidence Interval for Mean	Lower Bound	4.51	
		Upper Bound	4.68	
	5% Trimmed Mean		4.71	
	Median		5.00	
	Variance		0.624	
	Std. Deviation		0.790	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-2.341	0.129
	Kurtosis		5.781	0.257

### Appendix G: Nursing Student Identity Items Descriptive Statistics

			Statistic	Std. Error
Feel called to their work	Mean		4.24	0.042
	95% Confidence Interval for Mean	Lower Bound	4.15	
		Upper Bound	4.32	
	5% Trimmed Mean		4.32	
	Median		4.00	
	Variance		0.635	
	Std. Deviation		0.797	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-1.184	0.129
	Kurtosis		1.796	0.257
Be angelic in their work	Mean		3.43	0.064
	95% Confidence Interval for Mean	Lower Bound	3.30	
		Upper Bound	3.55	
	5% Trimmed Mean		3.48	
	Median		4.00	
	Variance		1.453	
	Std. Deviation		1.206	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-0.446	0.129
	Kurtosis		-0.729	0.257
Never get angry	Mean		3.38	0.067
	95% Confidence Interval for Mean	Lower Bound	3.25	
		Upper Bound	3.51	
	5% Trimmed Mean		3.42	

	Median		4.00	
	Variance		1.613	
	Std. Deviation		1.270	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.397	0.129
	Kurtosis		-1.017	0.257
Feel their work is divine	Mean		3.24	0.063
	95% Confidence Interval for Mean	Lower Bound	3.11	
		Upper Bound	3.36	
	5% Trimmed Mean		3.26	
	Median		3.00	
	Variance		1.435	
	Std. Deviation		1.198	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.251	0.129
	Kurtosis		-0.797	0.257
Always care	Mean		4.52	0.039
	95% Confidence Interval for Mean	Lower Bound	4.44	
		Upper Bound	4.59	
	5% Trimmed Mean		4.62	
	Median		5.00	
	Variance		0.554	
	Std. Deviation		0.744	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-1.904	0.129
	Kurtosis		4.324	0.257
Selflessly serve others	Mean		4.17	0.047

	95% Confidence Interval for Mean	Lower Bound	4.08	
		Upper Bound	4.26	
	5% Trimmed Mean		4.26	
	Median		4.00	
	Variance		0.805	
	Std. Deviation		0.897	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-1.305	0.129
	Kurtosis		1.765	0.257
	Mean		3.69	0.066
Not prioritize their own needs over others	95% Confidence Interval for Mean	Lower Bound	3.56	
		Upper Bound	3.82	
	5% Trimmed Mean		3.76	
	Median		4.00	
	Variance		1.536	
	Std. Deviation		1.239	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.846	0.129
	Kurtosis		-0.299	0.257
	Mean		3.45	0.066
Work for little compensation or reward	95% Confidence Interval for Mean	Lower Bound	3.32	
		Upper Bound	3.58	
	5% Trimmed Mean		3.50	
	Median		4.00	
	Variance		1.568	
	Std. Deviation		1.252	
	Minimum		1	
	Maximum		5	

	Range		4	
	Interquartile Range		2	
	Skewness		-0.464	0.129
	Kurtosis		-0.859	0.257
Never complain	Mean		3.36	0.067
	95% Confidence Interval for Mean	Lower Bound	3.23	
		Upper Bound	3.49	
	5% Trimmed Mean		3.40	
	Median		4.00	
	Variance		1.624	
	Std. Deviation		1.274	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.271	0.129
	Kurtosis		-1.179	0.257
Not work as subordinates	Mean		2.28	0.063
	95% Confidence Interval for Mean	Lower Bound	2.16	
		Upper Bound	2.40	
	5% Trimmed Mean		2.20	
	Median		2.00	
	Variance		1.404	
	Std. Deviation		1.185	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		0.859	0.129
	Kurtosis		-0.211	0.257
Lead others	Mean		3.20	0.063
	95% Confidence Interval for Mean	Lower Bound	3.07	
		Upper Bound	3.32	
	5% Trimmed Mean		3.22	

	Median		3.00	
	Variance		1.433	
	Std. Deviation		1.197	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.117	0.129
	Kurtosis		-1.099	0.257
Question authority	Mean		2.32	0.057
	95% Confidence Interval for Mean	Lower Bound	2.21	
		Upper Bound	2.43	
	5% Trimmed Mean		2.28	
	Median		2.00	
	Variance		1.146	
	Std. Deviation		1.070	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		0.532	0.129
	Kurtosis		-0.629	0.257
Be stoic	Mean		3.05	0.065
	95% Confidence Interval for Mean	Lower Bound	2.92	
		Upper Bound	3.17	
	5% Trimmed Mean		3.05	
	Median		3.00	
	Variance		1.489	
	Std. Deviation		1.220	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.119	0.129
	Kurtosis		-1.049	0.257
Not be intimidating	Mean		4.47	0.038

	95% Confidence Interval for Mean	Lower Bound	4.40	
		Upper Bound	4.55	
	5% Trimmed Mean		4.54	
	Median		5.00	
	Variance		0.519	
	Std. Deviation		0.721	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-1.390	0.129
	Kurtosis		2.052	0.257
Be self-sufficient in their work	Mean		3.27	0.067
	95% Confidence Interval for Mean	Lower Bound	3.13	
		Upper Bound	3.40	
	5% Trimmed Mean		3.30	
	Median		4.00	
	Variance		1.617	
	Std. Deviation		1.272	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.255	0.129
	Kurtosis		-1.204	0.257
Seek assistance with their work	Mean		4.10	0.048
	95% Confidence Interval for Mean	Lower Bound	4.01	
		Upper Bound	4.20	
	5% Trimmed Mean		4.18	
	Median		4.00	
	Variance		0.838	
	Std. Deviation		0.915	
	Minimum		1	
	Maximum		5	



	Range		4	
	Interquartile Range		1	
	Skewness		-1.085	0.129
	Kurtosis		0.857	0.257
Not focus on financial aspects of their job	Mean		3.76	0.053
	95% Confidence Interval for Mean	Lower Bound	3.66	
		Upper Bound	3.87	
	5% Trimmed Mean		3.83	
	Median		4.00	
	Variance		1.006	
	Std. Deviation		1.003	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-0.774	0.129
	Kurtosis		0.184	0.257
Not think about the financial rewards of their job	Mean		3.35	0.064
	95% Confidence Interval for Mean	Lower Bound	3.23	
		Upper Bound	3.48	
	5% Trimmed Mean		3.39	
	Median		4.00	
	Variance		1.442	
	Std. Deviation		1.201	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.257	0.129
	Kurtosis		-1.105	0.257
Remain seen	Mean		3.30	0.069
	95% Confidence Interval for Mean	Lower Bound	3.16	
		Upper Bound	3.43	
	5% Trimmed Mean		3.33	

	Median		4.00	
	Variance		1.698	
	Std. Deviation		1.303	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.327	0.129
	Kurtosis		-1.094	0.257
Not give orders and directives without input	Mean		4.19	0.049
	95% Confidence Interval for Mean	Lower Bound	4.09	
		Upper Bound	4.28	
	5% Trimmed Mean		4.28	
	Median		4.00	
	Variance		0.872	
	Std. Deviation		0.934	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-1.215	0.129
	Kurtosis		1.182	0.257
Provide emotional support to others	Mean		4.24	0.043
	95% Confidence Interval for Mean	Lower Bound	4.15	
		Upper Bound	4.32	
	5% Trimmed Mean		4.32	
	Median		4.00	
	Variance		0.675	
	Std. Deviation		0.821	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-1.224	0.129
	Kurtosis		1.549	0.257
Think critically	Mean		4.39	0.044

	95% Confidence Interval for Mean	Lower Bound	4.30	
		Upper Bound	4.47	
	5% Trimmed Mean		4.49	
	Median		5.00	
	Variance		0.698	
	Std. Deviation		0.836	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-1.524	0.129
	Kurtosis		2.210	0.257

## Appendix H: Practicing Nurse Identity Items Descriptive Statistics

	Statistic		Std. Error
Feel called to their work	Mean		4.45
	95% Confidence Interval for Mean	Lower Bound	4.37
		Upper Bound	4.52
	5% Trimmed Mean		4.54
	Median		5.00
	Variance		0.579
	Std. Deviation		0.761
	Minimum		1
	Maximum		5
	Range		4
	Interquartile Range		1
	Skewness		-1.718
	Kurtosis		3.848
			0.129
			0.257
Be angelic in their work	Mean		3.74
	95% Confidence Interval for Mean	Lower Bound	3.61
		Upper Bound	3.87
	5% Trimmed Mean		3.82
	Median		4.00
	Variance		1.537
	Std. Deviation		1.240
	Minimum		1
	Maximum		5
	Range		4
	Interquartile Range		2
	Skewness		-0.814
	Kurtosis		-0.308
			0.129
			0.257
Never get angry	Mean		3.87
	95% Confidence Interval for Mean	Lower Bound	3.74
		Upper Bound	3.99
	5% Trimmed Mean		3.96

	Median		4.00	
	Variance		1.418	
	Std. Deviation		1.191	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.958	0.129
	Kurtosis		-0.126	0.257
Feel their work is divine	Mean		3.59	0.063
	95% Confidence Interval for Mean	Lower Bound	3.46	
		Upper Bound	3.71	
	5% Trimmed Mean		3.65	
	Median		4.00	
	Variance		1.395	
	Std. Deviation		1.181	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.478	0.129
	Kurtosis		-0.676	0.257
Always care	Mean		4.76	0.028
	95% Confidence Interval for Mean	Lower Bound	4.71	
		Upper Bound	4.82	
	5% Trimmed Mean		4.84	
	Median		5.00	
	Variance		0.287	
	Std. Deviation		0.536	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		0	
	Skewness		-2.885	0.129
	Kurtosis		11.073	0.257
Selflessly serve others	Mean		4.55	0.040

	95% Confidence Interval for Mean	Lower Bound	4.47	
		Upper Bound	4.63	
	5% Trimmed Mean		4.66	
	Median		5.00	
	Variance		0.563	
	Std. Deviation		0.750	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-1.985	0.129
	Kurtosis		4.127	0.257
	Mean		3.95	0.066
Not prioritize their own needs over others	95% Confidence Interval for Mean	Lower Bound	3.82	
		Upper Bound	4.08	
	5% Trimmed Mean		4.06	
	Median		4.00	
	Variance		1.557	
	Std. Deviation		1.248	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-1.236	0.129
	Kurtosis		0.456	0.257
	Mean		3.40	0.067
Work for little compensation or reward	95% Confidence Interval for Mean	Lower Bound	3.27	
		Upper Bound	3.53	
	5% Trimmed Mean		3.45	
	Median		4.00	
	Variance		1.595	
	Std. Deviation		1.263	
	Minimum		1	
	Maximum		5	

	Range		4	
	Interquartile Range		2	
	Skewness		-0.466	0.129
	Kurtosis		-0.966	0.257
Never complain	Mean		3.78	0.065
	95% Confidence Interval for Mean	Lower Bound	3.65	
		Upper Bound	3.91	
	5% Trimmed Mean		3.87	
	Median		4.00	
	Variance		1.508	
	Std. Deviation		1.228	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.839	0.129
	Kurtosis		-0.385	0.257
Work as subordinates	Mean		2.58	0.066
	95% Confidence Interval for Mean	Lower Bound	2.45	
		Upper Bound	2.71	
	5% Trimmed Mean		2.54	
	Median		2.00	
	Variance		1.542	
	Std. Deviation		1.242	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		0.549	0.129
	Kurtosis		-0.833	0.257
Lead others	Mean		4.10	0.052
	95% Confidence Interval for Mean	Lower Bound	4.00	
		Upper Bound	4.21	
	5% Trimmed Mean		4.19	

	Median		4.00	
	Variance		0.953	
	Std. Deviation		0.976	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-1.120	0.129
	Kurtosis		0.733	0.257
Question authority	Mean		2.71	0.061
	95% Confidence Interval for Mean	Lower Bound	2.59	
		Upper Bound	2.83	
	5% Trimmed Mean		2.68	
	Median		2.00	
	Variance		1.308	
	Std. Deviation		1.144	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		0.249	0.129
	Kurtosis		-0.979	0.257
Be stoic	Mean		3.52	0.070
	95% Confidence Interval for Mean	Lower Bound	3.39	
		Upper Bound	3.66	
	5% Trimmed Mean		3.58	
	Median		4.00	
	Variance		1.761	
	Std. Deviation		1.327	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		3	
	Skewness		-0.519	0.129
	Kurtosis		-0.979	0.257
Be intimidating	Mean		4.13	0.046



	95% Confidence Interval for Mean	Lower Bound	4.04	
		Upper Bound	4.22	
	5% Trimmed Mean		4.20	
	Median		4.00	
	Variance		0.764	
	Std. Deviation		0.874	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-0.888	0.129
	Kurtosis		0.315	0.257
Be self-sufficient in their work	Mean		4.33	0.041
	95% Confidence Interval for Mean	Lower Bound	4.25	
		Upper Bound	4.41	
	5% Trimmed Mean		4.41	
	Median		4.00	
	Variance		0.587	
	Std. Deviation		0.766	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-1.244	0.129
	Kurtosis		1.821	0.257
Seek assistance with their work	Mean		3.25	0.058
	95% Confidence Interval for Mean	Lower Bound	3.14	
		Upper Bound	3.37	
	5% Trimmed Mean		3.27	
	Median		3.00	
	Variance		1.217	
	Std. Deviation		1.103	
	Minimum		1	
	Maximum		5	

	Range		4	
	Interquartile Range		2	
	Skewness		-0.184	0.129
	Kurtosis		-1.002	0.257
Not focus on financial aspects of their job	Mean		3.91	0.048
	95% Confidence Interval for Mean	Lower Bound	3.82	
		Upper Bound	4.00	
	5% Trimmed Mean		3.97	
	Median		4.00	
	Variance		0.807	
	Std. Deviation		0.898	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-0.782	0.129
	Kurtosis		0.348	0.257
Not think about the financial rewards of their job	Mean		3.70	0.063
	95% Confidence Interval for Mean	Lower Bound	3.58	
		Upper Bound	3.82	
	5% Trimmed Mean		3.77	
	Median		4.00	
	Variance		1.413	
	Std. Deviation		1.189	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.685	0.129
	Kurtosis		-0.619	0.257
Remain seen	Mean		3.46	0.070
	95% Confidence Interval for Mean	Lower Bound	3.33	
		Upper Bound	3.60	
	5% Trimmed Mean		3.51	

	Median		4.00	
	Variance		1.727	
	Std. Deviation		1.314	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		3	
	Skewness		-0.459	0.129
	Kurtosis		-0.998	0.257
Not give orders and directives without input	Mean		3.69	0.056
	95% Confidence Interval for Mean	Lower Bound	3.58	
		Upper Bound	3.80	
	5% Trimmed Mean		3.74	
	Median		4.00	
	Variance		1.126	
	Std. Deviation		1.061	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-0.652	0.129
	Kurtosis		-0.282	0.257
Provide emotional support to others	Mean		4.79	0.024
	95% Confidence Interval for Mean	Lower Bound	4.74	
		Upper Bound	4.84	
	5% Trimmed Mean		4.83	
	Median		5.00	
	Variance		0.213	
	Std. Deviation		0.461	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		0	
	Skewness		-2.763	0.129
	Kurtosis		12.895	0.257
Think critically	Mean		4.56	0.041

	95% Confidence Interval for Mean	Lower Bound	4.48	
		Upper Bound	4.64	
	5% Trimmed Mean		4.68	
	Median		5.00	
	Variance		0.590	
	Std. Deviation		0.768	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-2.280	0.129
	Kurtosis		6.065	0.257

### Appendix I: Physician Identity Items Descriptive Statistics

	Statistic		Std. Error
Feel called to their work	Mean		3.84
	95% Confidence Interval for Mean	Lower Bound	3.73
		Upper Bound	3.95
	5% Trimmed Mean		3.91
	Median		4.00
	Variance		1.050
	Std. Deviation		1.025
	Minimum		1
	Maximum		5
	Range		4
	Interquartile Range		2
	Skewness		-0.762
	Kurtosis		0.129
			0.257
Be angelic in their work	Mean		2.26
	95% Confidence Interval for Mean	Lower Bound	2.14
		Upper Bound	2.39
	5% Trimmed Mean		2.18
	Median		2.00
	Variance		1.391
	Std. Deviation		1.179
	Minimum		1
	Maximum		5
	Range		4
	Interquartile Range		2
	Skewness		0.727
	Kurtosis		-0.369
			0.257
Never get angry	Mean		2.69
	95% Confidence Interval for Mean	Lower Bound	2.56
		Upper Bound	2.82
	5% Trimmed Mean		2.66
	Median		2.00

	Variance		1.579	
	Std. Deviation		1.257	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		0.316	0.129
	Kurtosis		-1.093	0.257
Feel their work is divine	Mean		3.02	0.070
	95% Confidence Interval for Mean	Lower Bound	2.88	
		Upper Bound	3.16	
	5% Trimmed Mean		3.02	
	Median		3.00	
	Variance		1.752	
	Std. Deviation		1.324	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		0.046	0.129
	Kurtosis		-1.110	0.257
Always care	Mean		3.63	0.063
	95% Confidence Interval for Mean	Lower Bound	3.51	
		Upper Bound	3.76	
	5% Trimmed Mean		3.69	
	Median		4.00	
	Variance		1.401	
	Std. Deviation		1.184	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.484	0.129
	Kurtosis		-0.884	0.257
Selflessly serve others	Mean		3.16	0.069

	95% Confidence Interval for Mean	Lower Bound	3.03	
		Upper Bound	3.30	
	5% Trimmed Mean		3.18	
	Median		3.00	
	Variance		1.687	
	Std. Deviation		1.299	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.073	0.129
	Kurtosis		-1.268	0.257
Not prioritize their own needs over others	Mean		3.12	0.069
	95% Confidence Interval for Mean	Lower Bound	2.99	
		Upper Bound	3.26	
	5% Trimmed Mean		3.14	
	Median		3.00	
	Variance		1.687	
	Std. Deviation		1.299	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.169	0.129
	Kurtosis		-1.155	0.257
Work for little compensation or reward	Mean		1.48	0.044
	95% Confidence Interval for Mean	Lower Bound	1.39	
		Upper Bound	1.57	
	5% Trimmed Mean		1.36	
	Median		1.00	
	Variance		0.705	
	Std. Deviation		0.840	
	Minimum		1	
	Maximum		5	

	Range		4	
	Interquartile Range		1	
	Skewness		2.303	0.129
	Kurtosis		5.965	0.257
Never complain	Mean		2.81	0.067
	95% Confidence Interval for Mean	Lower Bound	2.67	
		Upper Bound	2.94	
	5% Trimmed Mean		2.79	
	Median		3.00	
	Variance		1.617	
	Std. Deviation		1.272	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		0.235	0.129
	Kurtosis		-1.068	0.257
Work as subordinates	Mean		4.67	0.035
	95% Confidence Interval for Mean	Lower Bound	4.60	
		Upper Bound	4.74	
	5% Trimmed Mean		4.77	
	Median		5.00	
	Variance		0.436	
	Std. Deviation		0.661	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-2.513	0.129
	Kurtosis		7.735	0.257
Lead others	Mean		4.61	0.034
	95% Confidence Interval for Mean	Lower Bound	4.55	
		Upper Bound	4.68	
	5% Trimmed Mean		4.70	



	Median		5.00	
	Variance		0.412	
	Std. Deviation		0.642	
	Minimum		2	
	Maximum		5	
	Range		3	
	Interquartile Range		1	
	Skewness		-1.873	0.129
	Kurtosis		3.935	0.257
	Mean		3.59	0.069
Question authority	95% Confidence Interval for Mean	Lower Bound	3.45	
		Upper Bound	3.73	
	5% Trimmed Mean		3.66	
	Median		4.00	
	Variance		1.714	
	Std. Deviation		1.309	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.706	0.129
	Kurtosis		-0.652	0.257
	Mean		3.80	0.061
	95% Confidence Interval for Mean	Lower Bound	3.68	
		Upper Bound	3.92	
Be stoic	5% Trimmed Mean		3.89	
	Median		4.00	
	Variance		1.349	
	Std. Deviation		1.162	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		-0.932	0.129
	Kurtosis		0.066	0.257
	Mean		2.46	0.066
Be intimidating	Mean		2.46	0.066

	95% Confidence Interval for Mean	Lower Bound	2.33	
		Upper Bound	2.59	
	5% Trimmed Mean		2.40	
	Median		2.00	
	Variance		1.563	
	Std. Deviation		1.250	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		0.671	0.129
	Kurtosis		-0.591	0.257
Be self-sufficient in their work	Mean		4.59	0.039
	95% Confidence Interval for Mean	Lower Bound	4.51	
		Upper Bound	4.66	
	5% Trimmed Mean		4.69	
	Median		5.00	
	Variance		0.547	
	Std. Deviation		0.739	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-2.267	0.129
	Kurtosis		6.021	0.257
Seek assistance with their work	Mean		2.41	0.063
	95% Confidence Interval for Mean	Lower Bound	2.29	
		Upper Bound	2.53	
	5% Trimmed Mean		2.34	
	Median		2.00	
	Variance		1.400	
	Std. Deviation		1.183	
	Minimum		1	
	Maximum		5	

	Range		4	
	Interquartile Range		1	
	Skewness		0.557	0.129
	Kurtosis		-0.724	0.257
Not focus on financial aspects of their job	Mean		2.33	0.063
	95% Confidence Interval for Mean	Lower Bound	2.21	
		Upper Bound	2.46	
	5% Trimmed Mean		2.26	
	Median		2.00	
	Variance		1.425	
	Std. Deviation		1.194	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		0.758	0.129
	Kurtosis		-0.404	0.257
Not think about the financial rewards of their job	Mean		2.01	0.057
	95% Confidence Interval for Mean	Lower Bound	1.89	
		Upper Bound	2.12	
	5% Trimmed Mean		1.92	
	Median		2.00	
	Variance		1.169	
	Std. Deviation		1.081	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		1.062	0.129
	Kurtosis		0.333	0.257
Remain seen	Mean		4.66	0.037
	95% Confidence Interval for Mean	Lower Bound	4.59	
		Upper Bound	4.73	
	5% Trimmed Mean		4.77	

	Median		5.00	
	Variance		0.484	
	Std. Deviation		0.696	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		-2.845	0.129
	Kurtosis		10.253	0.257
Not give orders and directives without input	Mean		1.80	0.058
	95% Confidence Interval for Mean	Lower Bound	1.69	
		Upper Bound	1.92	
	5% Trimmed Mean		1.67	
	Median		1.00	
	Variance		1.216	
	Std. Deviation		1.103	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		1.525	0.129
	Kurtosis		1.603	0.257
Provide emotional support to others	Mean		2.95	0.064
	95% Confidence Interval for Mean	Lower Bound	2.82	
		Upper Bound	3.07	
	5% Trimmed Mean		2.94	
	Median		3.00	
	Variance		1.472	
	Std. Deviation		1.213	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		0.159	0.129
	Kurtosis		-1.082	0.257
Think critically	Mean		4.85	0.023

	95% Confidence Interval for Mean	Lower Bound	4.81	
		Upper Bound	4.90	
	5% Trimmed Mean		4.91	
	Median		5.00	
	Variance		0.183	
	Std. Deviation		0.428	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		0	
	Skewness		-4.073	0.129
	Kurtosis		24.389	0.257

## Appendix J: Nursing Faculty Identity Items Normality Tests

Tests of Normality						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Feel called to their work	0.238	357	0.000	0.806	357	0.000
Be angelic in their work	0.207	357	0.000	0.900	357	0.000
Never get angry	0.257	357	0.000	0.870	357	0.000
Feel their work is divine	0.165	357	0.000	0.915	357	0.000
Always care	0.393	357	0.000	0.669	357	0.000
Selflessly serve others	0.260	357	0.000	0.756	357	0.000
Not prioritize their own needs over others	0.260	357	0.000	0.791	357	0.000
Work for little compensation or reward	0.260	357	0.000	0.851	357	0.000
Never complain	0.270	357	0.000	0.867	357	0.000
Work as subordinates	0.189	357	0.000	0.897	357	0.000
Lead others	0.337	357	0.000	0.691	357	0.000
Question authority	0.231	357	0.000	0.896	357	0.000
Be stoic	0.223	357	0.000	0.897	357	0.000
Not be intimidating	0.222	357	0.000	0.860	357	0.000
Be self sufficient in their work	0.313	357	0.000	0.741	357	0.000
Seek assistance with their work	0.177	357	0.000	0.911	357	0.000
Not focus on financial aspects of their job	0.250	357	0.000	0.844	357	0.000
Not think about the financial rewards of their job	0.276	357	0.000	0.831	357	0.000
Remain seen	0.199	357	0.000	0.890	357	0.000
Not give orders and directives without input	0.248	357	0.000	0.874	357	0.000
Provide emotional support to others	0.351	357	0.000	0.672	357	0.000
Think critically	0.422	357	0.000	0.573	357	0.000
a. Lilliefors Significance Correction						

## Appendix K: Nursing Student Identity Items Normality Tests

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Feel called to their work	0.263	357	0.000	0.771	357	0.000
Be angelic in their work	0.223	357	0.000	0.894	357	0.000
Never get angry	0.250	357	0.000	0.879	357	0.000
Feel their work is divine	0.183	357	0.000	0.910	357	0.000
Always care	0.364	357	0.000	0.655	357	0.000
Selflessly serve others	0.282	357	0.000	0.770	357	0.000
Not prioritize their own needs over others	0.286	357	0.000	0.836	357	0.000
Work for little compensation or reward	0.236	357	0.000	0.884	357	0.000
Never complain	0.236	357	0.000	0.878	357	0.000
Work as subordinates	0.299	357	0.000	0.833	357	0.000
Lead others	0.220	357	0.000	0.895	357	0.000
Question authority	0.263	357	0.000	0.869	357	0.000
Be stoic	0.205	357	0.000	0.904	357	0.000
Be intimidating	0.351	357	0.000	0.710	357	0.000
Be self sufficient in their work	0.259	357	0.000	0.872	357	0.000
Seek assistance with their work	0.282	357	0.000	0.795	357	0.000
Focus on financial aspects of their job	0.282	357	0.000	0.858	357	0.000
Not think about the financial rewards of their job	0.246	357	0.000	0.880	357	0.000
Remain seen	0.235	357	0.000	0.885	357	0.000
Not give orders and directives without input	0.256	357	0.000	0.782	357	0.000
Provide emotional support to others	0.272	357	0.000	0.758	357	0.000
Think critically	0.323	357	0.000	0.715	357	0.000
a. Lilliefors Significance Correction						

## Appendix L: Practicing Nurse Identity Items Normality Tests

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Feel called to their work	0.330	357	0.000	0.694	357	0.000
Be angelic in their work	0.242	357	0.000	0.844	357	0.000
Never get angry	0.289	357	0.000	0.808	357	0.000
Feel their work is divine	0.203	357	0.000	0.886	357	0.000
Always care	0.474	357	0.000	0.485	357	0.000
Selflessly serve others	0.389	357	0.000	0.626	357	0.000
Not prioritize their own needs over others	0.305	357	0.000	0.758	357	0.000
Work for little compensation or reward	0.273	357	0.000	0.868	357	0.000
Never complain	0.274	357	0.000	0.828	357	0.000
Not work as subordinates	0.288	357	0.000	0.861	357	0.000
Lead others	0.267	357	0.000	0.794	357	0.000
Question authority	0.245	357	0.000	0.889	357	0.000
Be stoic	0.240	357	0.000	0.862	357	0.000
Not be intimidating	0.248	357	0.000	0.813	357	0.000
Be self sufficient in their work	0.279	357	0.000	0.751	357	0.000
Seek assistance with their work	0.244	357	0.000	0.886	357	0.000
Not focus on financial aspects of their job	0.293	357	0.000	0.839	357	0.000
Not think about the financial rewards of their job	0.277	357	0.000	0.846	357	0.000
Remain seen	0.233	357	0.000	0.873	357	0.000
Not give orders and directives without input	0.272	357	0.000	0.868	357	0.000
Provide emotional support to others	0.479	357	0.000	0.481	357	0.000
Think critically	0.389	357	0.000	0.605	357	0.000
a. Lilliefors Significance Correction						



### Appendix M: Physician Identity Items Normality Tests

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Feel called to their work	0.248	357	0.000	0.860	357	0.000
Be angelic in their work	0.238	357	0.000	0.859	357	0.000
Never get angry	0.252	357	0.000	0.880	357	0.000
Feel their work is divine	0.155	357	0.000	0.903	357	0.000
Always care	0.235	357	0.000	0.869	357	0.000
Selflessly serve others	0.214	357	0.000	0.885	357	0.000
Not prioritize their own needs over others	0.212	357	0.000	0.897	357	0.000
Work for little compensation or reward	0.378	357	0.000	0.609	357	0.000
Never complain	0.216	357	0.000	0.898	357	0.000
Not work as subordinates	0.435	357	0.000	0.553	357	0.000
Lead others	0.407	357	0.000	0.619	357	0.000
Question authority	0.261	357	0.000	0.848	357	0.000
Be stoic	0.276	357	0.000	0.834	357	0.000
Not be intimidating	0.270	357	0.000	0.861	357	0.000
Be self sufficient in their work	0.402	357	0.000	0.600	357	0.000
Seek assistance with their work	0.260	357	0.000	0.870	357	0.000
Not focus on financial aspects of their job	0.285	357	0.000	0.849	357	0.000
Not think about the financial rewards of their job	0.281	357	0.000	0.800	357	0.000
Remain seen	0.428	357	0.000	0.533	357	0.000
Not give orders and directives without input	0.290	357	0.000	0.721	357	0.000
Provide emotional support to others	0.225	357	0.000	0.896	357	0.000
Think critically	0.504	357	0.000	0.375	357	0.000
a. Lilliefors Significance Correction						

## Appendix N: Factor Correlation Matrices

**Table N1**

*Nursing faculty factor correlation matrix (17 items)*

Factor	1	2	3	4
1	1.000	-.058	-.273	-.582
2	-.058	1.000	.233	-.077
3	-.273	.233	1.000	.119
4	-.582	-.077	.119	1.000

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser

Normalization.

**Table N2**

*Nursing student factor correlation matrix (17 items)*

Factor	1	2	3	4
1	1.000	-.097	-.009	-.572
2	-.097	1.000	-.060	-.170
3	-.009	-.060	1.000	.010
4	-.572	-.170	.010	1.000

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser

Normalization.

**Table N3**

*Practicing nurse factor correlation matrix (15 items)*

Factor	1	2	3	4
1	1.000	.048	.036	-.250
2	.048	1.000	.101	-.131
3	.036	.101	1.000	.038
4	-.250	-.131	.038	1.000

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser

Normalization.

**Table N4***Physician Factor Correlation Matrix (18 items)*

Factor	1	2	3	4	5
1	1.000	-.070	.208	.347	-.080
2	-.070	1.000	.025	-.142	.229
3	.208	.025	1.000	.179	.199
4	.347	-.142	.179	1.000	-.237
5	-.080	.229	.199	-.237	1.000

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

## Appendix O: Nursing Faculty Item Correlation Matrices

**Table O1**

*Nursing Faculty Item Correlation Matrix*

	Feel called to their work	Be angelic in their work	Never get angry	Feel their work is divine	Always care	Selflessly serve others	Work for little compensation or reward	Never complain	Not work as subordinates	Lead others	Be stoic	Not be intimidating	not think about the financial rewards of their job	Remain Seen	Not give orders and directives without input	Provide emotional support to others	Think critically
Feel called to their work	1.000	0.339	0.209	0.388	0.398	0.361	0.173	0.267	-0.263	0.158	0.212	-0.007	0.242	-0.095	-0.115	0.314	0.112
Be angelic in their work	0.339	1.000	0.508	0.521	0.299	0.422	0.342	0.498	-0.425	-0.062	0.313	-0.103	0.379	-0.348	-0.239	0.253	-0.108
Never get angry	0.209	0.508	1.000	0.338	0.355	0.432	0.442	0.619	-0.392	-0.077	0.413	-0.214	0.378	-0.327	-0.277	0.244	-0.080
Feel their work is divine	0.388	0.521	0.338	1.000	0.216	0.311	0.227	0.337	-0.277	-0.043	0.277	-0.126	0.261	-0.294	-0.184	0.193	0.004
Always care	0.398	0.299	0.355	0.216	1.000	0.502	0.227	0.310	-0.222	0.200	0.169	0.046	0.268	-0.034	-0.048	0.407	0.163
Selflessly serve others	0.361	0.422	0.432	0.311	0.502	1.000	0.416	0.500	-0.384	0.100	0.308	-0.073	0.348	-0.224	-0.172	0.370	0.028
Work for little compensation or reward	0.173	0.342	0.442	0.227	0.227	0.416	1.000	0.553	-0.413	-0.079	0.298	-0.215	0.596	-0.395	-0.215	0.102	-0.072
Never complain	0.267	0.498	0.619	0.337	0.310	0.500	0.553	1.000	-0.422	-0.146	0.403	-0.176	0.470	-0.358	-0.260	0.231	-0.098
Not work as subordinates	-0.263	-0.425	-0.392	-0.277	-0.222	-0.384	-0.413	-0.422	1.000	0.239	-0.238	0.127	-0.338	0.463	0.220	-0.211	0.167
Lead others	0.158	-0.062	-0.077	-0.043	0.200	0.100	-0.079	-0.146	0.239	1.000	0.019	0.045	-0.070	0.226	0.057	0.192	0.516
Be stoic	0.212	0.313	0.413	0.277	0.169	0.308	0.298	0.403	-0.238	0.019	1.000	-0.252	0.243	-0.248	-0.256	0.185	0.056
Not be intimidating	-0.007	-0.103	-0.214	-0.126	0.046	-0.073	-0.215	-0.176	0.127	0.045	-0.252	1.000	-0.197	0.315	0.329	0.059	-0.005

Not think about the financial rewards of their job	0.242	0.379	0.378	0.261	0.268	0.348	0.596	0.470	-0.338	-0.070	0.243	-0.197	1.000	-0.298	-0.255	0.189	-0.077
Remain seen	-0.095	-0.348	-0.327	-0.294	-0.034	-0.224	-0.395	-0.358	0.463	0.226	-0.248	0.315	-0.298	1.000	0.295	-0.054	0.197
Not give orders and directives without input	-0.115	-0.239	-0.277	-0.184	-0.048	-0.172	-0.215	-0.260	0.220	0.057	-0.256	0.329	-0.255	0.295	1.000	0.010	0.019
Provide emotional support to others	0.314	0.253	0.244	0.193	0.407	0.370	0.102	0.231	-0.211	0.192	0.185	0.059	0.189	-0.054	0.010	1.000	0.094
Think critically	0.112	-0.108	-0.080	0.004	0.163	0.028	-0.072	-0.098	0.167	0.516	0.056	-0.005	-0.077	0.197	0.019	0.094	1.000

**Table O2**

*Nursing Faculty Item Anti-Image Correlation Matrix*

	Feel called to their work	Be angelic in their work	Never get angry	Feel their work is divine	Always care	Selflessly serve others	Work for little compensation or reward	Never complain	Not work as subordinates	Lead others	Be stoic	Not be intimidating	not think about the financial rewards of their job	Remain Seen	Not give orders and directives without input	Provide emotional support to others	Think critically
Feel called to their work	.859 <sup>a</sup>	-0.063	0.106	-0.245	-0.192	-0.061	0.043	-0.048	0.128	-0.113	-0.052	-0.029	-0.063	-0.056	0.036	-0.090	-0.021
Be angelic in their work	-0.063	.899 <sup>a</sup>	-0.183	-0.331	-0.022	-0.067	0.055	-0.118	0.127	-0.053	-0.024	-0.071	-0.096	0.075	0.047	-0.026	0.097
Never get angry	0.106	-0.183	.900 <sup>a</sup>	-0.041	-0.179	-0.014	-0.073	-0.315	0.057	-0.002	-0.157	0.087	0.019	0.005	0.076	-0.049	0.051
Feel their work is divine	-0.245	-0.331	-0.041	.856 <sup>a</sup>	0.027	-0.040	0.035	0.000	-0.041	0.078	-0.062	0.029	-0.019	0.121	-0.001	-0.010	-0.080
Always care	-0.192	-0.022	-0.179	0.027	.846 <sup>a</sup>	-0.278	0.008	0.001	0.019	-0.064	0.061	-0.075	-0.083	-0.075	-0.043	-0.179	-0.110
Selflessly serve others	-0.061	-0.067	-0.014	-0.040	-0.278	.908 <sup>a</sup>	-0.142	-0.178	0.120	-0.114	-0.055	-0.015	0.027	-0.008	0.030	-0.132	0.038
Work for little compensation or reward	0.043	0.055	-0.073	0.035	0.008	-0.142	.846 <sup>a</sup>	-0.222	0.129	-0.055	-0.041	0.034	-0.427	0.151	-0.060	0.131	-0.012

Never complain	-0.048	-0.118	-0.315	0.000	0.001	-0.178	-0.222	.906 <sup>a</sup>	0.006	0.145	-0.123	-0.019	-0.090	0.026	0.027	-0.031	-0.014
Not work as subordinates	0.128	0.127	0.057	-0.041	0.019	0.120	0.129	0.006	.891 <sup>a</sup>	-0.211	-0.009	0.035	-0.001	-0.264	-0.040	0.097	-0.007
Lead others	-0.113	-0.053	-0.002	0.078	-0.064	-0.114	-0.055	0.145	-0.211	.620 <sup>a</sup>	-0.019	0.019	0.027	-0.054	0.008	-0.140	-0.444
Be stoic	-0.052	-0.024	-0.157	-0.062	0.061	-0.055	-0.041	-0.123	-0.009	-0.019	.922 <sup>a</sup>	0.134	0.031	0.028	0.085	-0.068	-0.080
Not be intimidating	-0.029	-0.071	0.087	0.029	-0.075	-0.015	0.034	-0.019	0.035	0.019	0.134	.781 <sup>a</sup>	0.071	-0.196	-0.212	-0.066	0.054
Not think about the financial rewards of their job	-0.063	-0.096	0.019	-0.019	-0.083	0.027	-0.427	-0.090	-0.001	0.027	0.031	0.071	.870 <sup>a</sup>	-0.013	0.106	-0.082	0.040
Remain seen	-0.056	0.075	0.005	0.121	-0.075	-0.008	0.151	0.026	-0.264	-0.054	0.028	-0.196	-0.013	.876 <sup>a</sup>	-0.105	0.006	-0.088
Not give orders and directives without input	0.036	0.047	0.076	-0.001	-0.043	0.030	-0.060	0.027	-0.040	0.008	0.085	-0.212	0.106	-0.105	.872 <sup>a</sup>	-0.099	0.033
Provide emotional support to others	-0.090	-0.026	-0.049	-0.010	-0.179	-0.132	0.131	-0.031	0.097	-0.140	-0.068	-0.066	-0.082	0.006	-0.099	.856 <sup>a</sup>	0.009
Think critically	-0.021	0.097	0.051	-0.080	-0.110	0.038	-0.012	-0.014	-0.007	-0.444	-0.080	0.054	0.040	-0.088	0.033	0.009	.629 <sup>a</sup>

**Table O3**

*Nursing Faculty Item Residual\* Matrix*

Feel called to their work		-0.029	-0.084	0.057	0.022	-0.013	0.019	-0.018	-0.039	0.001	-0.009	-0.002	0.046	0.014	-0.020	-0.003	-0.004
Be angelic in their work	-0.029		0.036	0.056	-0.027	-0.018	0.006	0.011	0.010	0.042	-0.021	0.042	0.029	0.011	0.005	-0.026	-0.011
Never get angry	-0.084	0.036		-0.023	0.043	-0.015	-0.037	0.090	0.028	-0.004	0.066	-0.008	-0.052	0.043	-0.008	0.009	-0.015
Feel their work is divine	0.057	0.056	-0.023		-0.032	-0.018	0.042	-0.011	0.045	-0.013	-0.012	0.016	0.033	-0.010	0.037	-0.036	0.028
Always care	0.022	-0.027	0.043	-0.032		0.038	-0.032	-0.025	0.000	-0.031	-0.028	-0.032	0.003	0.006	-0.023	0.019	0.005
Selflessly serve others	-0.013	-0.018	-0.015	-0.018	0.038		-0.006	0.014	-0.024	0.008	0.011	-0.018	-0.047	-0.007	-0.021	0.013	-0.023

Work for little compensation or reward	0.019	0.006	-0.037	0.042	-0.032	-0.006		-0.009	-0.016	0.026	-0.018	0.027	0.081	-0.026	0.047	-0.049	0.019
Never complain	-0.018	0.011	0.090	-0.011	-0.025	0.014	-0.009		0.044	-0.026	0.050	0.025	-0.019	0.040	0.009	-0.013	0.013
Not work as subordinates	-0.039	0.010	0.028	0.045	0.000	-0.024	-0.016	0.044		0.019	0.026	-0.011	0.023	0.106	0.010	-0.036	-0.030
Lead others	0.001	0.042	-0.004	-0.013	-0.031	0.008	0.026	-0.026	0.019		-0.021	0.014	0.000	-0.029	0.008	0.018	0.020
Be stoic	-0.009	-0.021	0.066	-0.012	-0.028	0.011	-0.018	0.050	0.026	-0.021		-0.016	-0.047	0.030	0.000	0.035	0.006
Not be intimidating	-0.002	0.042	-0.008	0.016	-0.032	-0.018	0.027	0.025	-0.011	0.014	-0.016		-0.006	0.030	0.031	-0.019	0.016
Not think about the financial rewards of their job	0.046	0.029	-0.052	0.033	0.003	-0.047	0.081	-0.019	0.023	0.000	-0.047	-0.006		0.022	-0.027	0.011	-0.013
Remain seen	0.014	0.011	0.043	-0.010	0.006	-0.007	-0.026	0.040	0.106	-0.029	0.030	0.030	0.022		-0.004	-0.028	0.002
Not give orders and directives without input	-0.020	0.005	-0.008	0.037	-0.023	-0.021	0.047	0.009	0.010	0.008	0.000	0.031	-0.027	-0.004		0.023	0.010
Provide emotional support to others	-0.003	-0.026	0.009	-0.036	0.019	0.013	-0.049	-0.013	-0.036	0.018	0.035	-0.019	0.011	-0.028	0.023		-0.023
Think critically	-0.004	-0.011	-0.015	0.028	0.005	-0.023	0.019	0.013	-0.030	0.020	0.006	0.016	-0.013	0.002	0.010	-0.023	

\*Residuals are computed between observed and reproduced correlations. There are 8 (5.0%) non-redundant residuals with absolute values greater than 0.05.

## Appendix P: Nursing Student Item Correlation Matrices

**Table P1**

*Nursing Student Item Correlation Matrix*

	Feel called to their work	Be angelic in their work	Never get angry	Feel their work is divine	Selflessly serve others	Work for little compensation or reward	Never complain	Not work as subordinates	Lead others	Be stoic	Not be intimidating	Be self-sufficient in their work	Not think about the financial rewards of their job	Remain Seen	Not give orders and directives without input	Provide emotional support to others	Think critically
Feel called to their work	1.000	0.365	0.180	0.424	0.403	0.175	0.218	-0.213	0.046	0.130	0.076	0.207	0.309	-0.165	0.057	0.228	0.095
Be angelic in their work	0.365	1.000	0.511	0.635	0.519	0.349	0.456	-0.430	-0.158	0.251	-0.068	0.154	0.396	-0.414	-0.097	0.196	-0.165
Never get angry	0.180	0.511	1.000	0.393	0.478	0.348	0.608	-0.383	-0.090	0.351	-0.077	0.177	0.435	-0.457	-0.155	0.159	-0.097
Feel their work is divine	0.424	0.635	0.393	1.000	0.354	0.180	0.321	-0.253	0.022	0.213	-0.075	0.255	0.238	-0.265	-0.181	0.160	-0.042
Selflessly serve others	0.403	0.519	0.478	0.354	1.000	0.337	0.492	-0.354	-0.018	0.185	0.058	0.167	0.356	-0.272	0.092	0.319	0.005
Work for little compensation or reward	0.175	0.349	0.348	0.180	0.337	1.000	0.353	-0.505	-0.250	0.205	-0.063	-0.057	0.431	-0.390	-0.046	0.020	-0.136
Never complain	0.218	0.456	0.608	0.321	0.492	0.353	1.000	-0.409	-0.147	0.316	-0.025	0.189	0.414	-0.413	-0.102	0.185	-0.157
Not work as subordinates	-0.213	-0.430	-0.383	-0.253	-0.354	-0.505	-0.409	1.000	0.369	-0.256	-0.059	0.122	-0.456	0.501	-0.053	-0.010	0.214
Lead others	0.046	-0.158	-0.090	0.022	-0.018	-0.250	-0.147	0.369	1.000	-0.058	-0.117	0.414	-0.193	0.350	-0.139	0.224	0.390
Be stoic	0.130	0.251	0.351	0.213	0.185	0.205	0.316	-0.256	-0.058	1.000	-0.112	0.147	0.272	-0.269	-0.114	0.112	-0.026
Not be intimidating	0.076	-0.068	-0.077	-0.075	0.058	-0.063	-0.025	-0.059	-0.117	-0.112	1.000	-0.186	-0.011	0.051	0.336	0.045	0.084
Be self-sufficient in their work	0.207	0.154	0.177	0.255	0.167	-0.057	0.189	0.122	0.414	0.147	-0.186	1.000	-0.008	-0.002	-0.246	0.230	0.223



Not think about the financial rewards of their job	0.309	0.396	0.435	0.238	0.356	0.431	0.414	-0.456	-0.193	0.272	-0.011	-0.008	1.000	-0.385	0.033	0.118	-0.131
Remain seen	-0.165	-0.414	-0.457	-0.265	-0.272	-0.390	-0.413	0.501	0.350	-0.269	0.051	-0.002	-0.385	1.000	0.106	-0.002	0.261
Not give orders and directives without input	0.057	-0.097	-0.155	-0.181	0.092	-0.046	-0.102	-0.053	-0.139	-0.114	0.336	-0.246	0.033	0.106	1.000	0.001	-0.025
Provide emotional support to others	0.228	0.196	0.159	0.160	0.319	0.020	0.185	-0.010	0.224	0.112	0.045	0.230	0.118	-0.002	0.001	1.000	0.051
Think critically	0.095	-0.165	-0.097	-0.042	0.005	-0.136	-0.157	0.214	0.390	-0.026	0.084	0.223	-0.131	0.261	-0.025	0.051	1.000

**Table P2**

*Nursing Student Item Anti-Image Correlation Matrix*

	Feel called to their work	Be angelic in their work	Never get angry	Feel their work is divine	Selflessly serve others	Work for little compensation or reward	Never complain	Not work as subordinates	Lead others	Be stoic	Not be intimidating	Be self-sufficient in their work	Not think about the financial rewards of their job	Remain Seen	Not give orders and directives without input	Provide emotional support to others	Think critically
Feel called to their work	.803 <sup>a</sup>	-0.033	0.151	-0.273	-0.192	-0.015	0.021	0.026	-0.012	-0.002	-0.071	-0.112	-0.192	0.039	-0.080	-0.080	-0.108
Be angelic in their work	-0.033	.860 <sup>a</sup>	-0.113	-0.477	-0.228	-0.042	-0.017	0.099	0.099	0.007	0.053	-0.031	-0.067	0.070	0.020	-0.065	0.088
Never get angry	0.151	-0.113	.880 <sup>a</sup>	-0.099	-0.178	-0.020	-0.321	0.001	-0.052	-0.127	0.004	-0.024	-0.153	0.177	0.084	0.008	-0.035
Feel their work is divine	-0.273	-0.477	-0.099	.796 <sup>a</sup>	0.032	0.056	0.009	0.027	-0.065	-0.032	-0.009	-0.080	0.061	-0.002	0.124	0.035	0.021
Selflessly serve others	-0.192	-0.228	-0.178	0.032	.860 <sup>a</sup>	-0.122	-0.205	0.064	-0.057	0.060	-0.028	-0.022	0.012	-0.028	-0.184	-0.189	-0.083
Work for little compensation or reward	-0.015	-0.042	-0.020	0.056	-0.122	.898 <sup>a</sup>	-0.039	0.254	0.056	-0.008	0.086	0.056	-0.175	0.076	0.070	0.040	-0.025

Never complain	0.021	-0.017	-0.321	0.009	-0.205	-0.039	.893 <sup>a</sup>	0.086	0.072	-0.082	-0.049	-0.153	-0.090	0.051	0.063	-0.046	0.102
Not work as subordinates	0.026	0.099	0.001	0.027	0.064	0.254	0.086	.900 <sup>a</sup>	-0.126	0.084	0.070	-0.101	0.134	-0.206	0.057	-0.049	-0.021
Lead others	-0.012	0.099	-0.052	-0.065	-0.057	0.056	0.072	-0.126	.751 <sup>a</sup>	0.027	0.098	-0.293	0.003	-0.192	0.068	-0.180	-0.245
Be stoic	-0.002	0.007	-0.127	-0.032	0.060	-0.008	-0.082	0.084	0.027	.915 <sup>a</sup>	0.080	-0.074	-0.082	0.058	0.021	-0.062	-0.055
Not be intimidating	-0.071	0.053	0.004	-0.009	-0.028	0.086	-0.049	0.070	0.098	0.080	.599 <sup>a</sup>	0.118	0.033	-0.011	-0.256	-0.080	-0.141
Be self-sufficient in their work	-0.112	-0.031	-0.024	-0.080	-0.022	0.056	-0.153	-0.101	-0.293	-0.074	0.118	.756 <sup>a</sup>	0.067	0.056	0.120	-0.078	-0.119
Not think about the financial rewards of their job	-0.192	-0.067	-0.153	0.061	0.012	-0.175	-0.090	0.134	0.003	-0.082	0.033	0.067	.909 <sup>a</sup>	0.061	-0.072	-0.038	0.016
Remain seen	0.039	0.070	0.177	-0.002	-0.028	0.076	0.051	-0.206	-0.192	0.058	-0.011	0.056	0.061	.907 <sup>a</sup>	-0.091	-0.040	-0.109
Not give orders and directives without input	-0.080	0.020	0.084	0.124	-0.184	0.070	0.063	0.057	0.068	0.021	-0.256	0.120	-0.072	-0.091	.639 <sup>a</sup>	-0.003	0.042
Provide emotional support to others	-0.080	-0.065	0.008	0.035	-0.189	0.040	-0.046	-0.049	-0.180	-0.062	-0.080	-0.078	-0.038	-0.040	-0.003	.790 <sup>a</sup>	0.067
Think critically	-0.108	0.088	-0.035	0.021	-0.083	-0.025	0.102	-0.021	-0.245	-0.055	-0.141	-0.119	0.016	-0.109	0.042	0.067	.737 <sup>a</sup>

**Table P3**

*Nursing Student Item Residual\**

	Feel called to their work	Be angelic in their work	Never get angry	Feel their work is divine	Selflessly serve others	Work for little compensation or reward	Never complain	Not work as subordinates	Lead others	Be stoic	Not be intimidating	Be self-sufficient in their work	Not think about the financial rewards of their job	Remain Seen	Not give orders and directives without input	Provide emotional support to others	Think critically
Feel called to their work		-0.030	-0.075	0.013	-0.004	0.027	-0.036	-0.016	-0.013	0.009	-0.010	0.036	0.078	-0.029	-0.011	0.000	0.044

Be angelic in their work	-0.030		0.017	0.005	0.040	-0.007	-0.009	0.008	-0.004	-0.021	-0.018	-0.006	-0.014	0.014	0.004	0.021	-0.032
Never get angry	-0.075	0.017		0.030	0.024	-0.048	0.060	0.045	0.003	0.014	0.039	-0.025	-0.001	-0.012	0.008	-0.017	0.010
Feel their work is divine	0.013	0.005	0.030		-0.022	-0.014	0.010	-0.006	0.011	0.015	0.023	-0.010	-0.011	0.011	-0.001	-0.023	0.004
Selflessly serve others	-0.004	0.040	0.024	-0.022		0.023	0.029	0.017	-0.013	-0.053	-0.032	-0.016	-0.053	0.019	0.011	0.036	-0.007
Work for little compensation or reward	0.027	-0.007	-0.048	-0.014	0.023		-0.044	-0.077	0.026	-0.021	-0.052	-0.019	0.060	0.010	-0.034	-0.029	0.049
Never complain	-0.036	-0.009	0.060	0.010	0.029	-0.044		0.027	-0.034	-0.002	0.044	0.028	-0.026	0.017	-0.001	0.008	-0.053
Not work as subordinates	-0.016	0.008	0.045	-0.006	0.017	-0.077	0.027		-0.031	-0.023	-0.014	-0.001	-0.015	0.028	0.007	0.027	-0.035
Lead others	-0.013	-0.004	0.003	0.011	-0.013	0.026	-0.034	-0.031		-0.018	-0.029	-0.007	0.028	0.013	0.004	0.017	0.042
Be stoic	0.009	-0.021	0.014	0.015	-0.053	-0.021	-0.002	-0.023	-0.018		-0.011	0.013	0.030	-0.008	0.021	0.020	0.037
Not be intimidating	-0.010	-0.018	0.039	0.023	-0.032	-0.052	0.044	-0.014	-0.029	-0.011		-0.013	-0.034	-0.027	0.021	0.014	0.061
Be self-sufficient in their work	0.036	-0.006	-0.025	-0.010	-0.016	-0.019	0.028	-0.001	-0.007	0.013	-0.013		-0.024	-0.041	0.010	0.001	0.017
Not think about the financial rewards of their job	0.078	-0.014	-0.001	-0.011	-0.053	0.060	-0.026	-0.015	0.028	0.030	-0.034	-0.024		0.008	0.010	-0.001	0.011
Remain seen	-0.029	0.014	-0.012	0.011	0.019	0.010	0.017	0.028	0.013	-0.008	-0.027	-0.041	0.008		0.009	0.009	0.013
Not give orders and directives without input	-0.011	0.004	0.008	-0.001	0.011	-0.034	-0.001	0.007	0.004	0.021	0.021	0.010	0.010	0.009		-0.011	-0.036
Provide emotional support to others	0.000	0.021	-0.017	-0.023	0.036	-0.029	0.008	0.027	0.017	0.020	0.014	0.001	-0.001	0.009	-0.011		-0.084
Think critically	0.044	-0.032	0.010	0.004	-0.007	0.049	-0.053	-0.035	0.042	0.037	0.061	0.017	0.011	0.013	-0.036	-0.084	

\*Residuals are computed between observed and reproduced correlations. There are 11 (8.0%) non-redundant residuals with absolute values greater than 0.05.

## Appendix Q: Practicing Nurse Item Correlation Matrices

**Table Q1**

*Practicing Nurse Item Correlation Matrix*

	Feel called to their work	Be angelic in their work	Never get angry	Feel their work is divine	Always care	Selflessly serve others	Work for little compensation or reward	Never complain	Not work as subordinates	Lead others	Not think about the financial rewards of their job	Remain Seen	Provide emotional support to others	Think critically
Feel called to their work	1.000	0.369	0.189	0.397	0.333	0.301	0.160	0.216	-0.207	0.138	0.238	-0.184	0.295	0.173
Be angelic in their work	0.369	1.000	0.526	0.737	0.342	0.447	0.412	0.545	-0.442	-0.080	0.383	-0.322	0.128	-0.081
Never get angry	0.189	0.526	1.000	0.412	0.299	0.443	0.542	0.726	-0.579	-0.128	0.567	-0.394	0.097	-0.039
Feel their work is divine	0.397	0.737	0.412	1.000	0.338	0.386	0.335	0.398	-0.335	-0.036	0.385	-0.296	0.142	-0.041
Always care	0.333	0.342	0.299	0.338	1.000	0.576	0.282	0.357	-0.224	0.057	0.339	-0.120	0.410	0.116
Selflessly serve others	0.301	0.447	0.443	0.386	0.576	1.000	0.399	0.522	-0.446	-0.048	0.435	-0.257	0.284	0.062
Work for little compensation or reward	0.160	0.412	0.542	0.335	0.282	0.399	1.000	0.575	-0.544	-0.052	0.584	-0.458	0.085	-0.080
Never complain	0.216	0.545	0.726	0.398	0.357	0.522	0.575	1.000	-0.572	-0.131	0.567	-0.432	0.116	-0.096
Not work as subordinates	-0.207	-0.442	-0.579	-0.335	-0.224	-0.446	-0.544	-0.572	1.000	0.307	-0.483	0.513	-0.102	0.205
Lead others	0.138	-0.080	-0.128	-0.036	0.057	-0.048	-0.052	-0.131	0.307	1.000	-0.048	0.166	0.193	0.496
Not think about the financial rewards of their job	0.238	0.383	0.567	0.385	0.339	0.435	0.584	0.567	-0.483	-0.048	1.000	-0.343	0.237	-0.071
Remain Seen	-0.184	-0.322	-0.394	-0.296	-0.120	-0.257	-0.458	-0.432	0.513	0.166	-0.343	1.000	-0.036	0.138

Provide emotional support to others	0.295	0.128	0.097	0.142	0.410	0.284	0.085	0.116	-0.102	0.193	0.237	-0.036	1.000	0.163
Think critically	0.173	-0.081	-0.039	-0.041	0.116	0.062	-0.080	-0.096	0.205	0.496	-0.071	0.138	0.163	1.000

**Table Q2**

*Practicing Nurse Item Anti-Image Correlation Matrix*

	Feel called to their work	Be angelic in their work	Never get angry	Feel their work is divine	Always care	Selflessly serve others	Work for little compensation or reward	Never complain	Not work as subordinates	Lead others	Not think about the financial rewards of their job	Remain Seen	Provide emotional support to others	Think critically
Feel called to their work	.876 <sup>a</sup>	-0.113	0.073	-0.159	-0.106	-0.023	0.073	0.009	0.086	-0.086	-0.048	0.084	-0.142	-0.136
Be angelic in their work	-0.113	.822 <sup>a</sup>	-0.130	-0.613	-0.007	-0.074	-0.059	-0.185	0.071	-0.017	0.131	-0.039	0.010	0.074
Never get angry	0.073	-0.130	.890 <sup>a</sup>	-0.029	-0.005	0.020	-0.053	-0.423	0.193	0.038	-0.194	0.004	0.041	-0.131
Feel their work is divine	-0.159	-0.613	-0.029	.797 <sup>a</sup>	-0.074	-0.026	0.022	0.101	-0.056	-0.001	-0.147	0.091	0.035	0.020
Always care	-0.106	-0.007	-0.005	-0.074	.830 <sup>a</sup>	-0.395	-0.067	-0.065	-0.095	0.025	-0.023	-0.069	-0.277	-0.039
Selflessly serve others	-0.023	-0.074	0.020	-0.026	-0.395	.888 <sup>a</sup>	-0.020	-0.168	0.173	0.046	-0.061	-0.029	-0.058	-0.110
Work for little compensation or reward	0.073	-0.059	-0.053	0.022	-0.067	-0.020	.901 <sup>a</sup>	-0.126	0.189	-0.127	-0.304	0.194	0.090	0.017
Never complain	0.009	-0.185	-0.423	0.101	-0.065	-0.168	-0.126	.895 <sup>a</sup>	0.063	-0.007	-0.132	0.106	0.046	0.058
Not work as subordinates	0.086	0.071	0.193	-0.056	-0.095	0.173	0.189	0.063	.893 <sup>a</sup>	-0.240	0.062	-0.247	0.066	-0.077
Lead others	-0.086	-0.017	0.038	-0.001	0.025	0.046	-0.127	-0.007	-0.240	.620 <sup>a</sup>	-0.037	-0.037	-0.143	-0.427
Not think about the financial rewards of their job	-0.048	0.131	-0.194	-0.147	-0.023	-0.061	-0.304	-0.132	0.062	-0.037	.899 <sup>a</sup>	-0.020	-0.158	0.080
Remain Seen	0.084	-0.039	0.004	0.091	-0.069	-0.029	0.194	0.106	-0.247	-0.037	-0.020	.905 <sup>a</sup>	-0.006	-0.031
Provide emotional support to others	-0.142	0.010	0.041	0.035	-0.277	-0.058	0.090	0.046	0.066	-0.143	-0.158	-0.006	.765 <sup>a</sup>	-0.030

Think critically	-0.136	0.074	-0.131	0.020	-0.039	-0.110	0.017	0.058	-0.077	-0.427	0.080	-0.031	-0.030	.617 <sup>a</sup>
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**Table Q3**

*Practicing Nurse Item Residual\**

	Feel called to their work	Be angelic in their work	Never get angry	Feel their work is divine	Always care	Selflessly serve others	Work for little compensation or reward	Never complain	Not work as subordinates	Lead others	Not think about the financial rewards of their job	Remain Seen	Provide emotional support to others	Think critically
Feel called to their work		-0.007	-0.037	0.010	-0.026	-0.023	-0.023	-0.025	-0.053	-0.014	0.005	-0.070	0.059	0.037
Be angelic in their work	-0.007		0.022	-0.001	0.004	0.015	0.001	0.030	0.005	0.010	-0.037	0.033	-0.012	-0.012
Never get angry	-0.037	0.022		-0.006	0.006	-0.007	-0.049	0.078	0.003	-0.020	0.014	0.049	-0.022	0.047
Feel their work is divine	0.010	-0.001	-0.006		0.006	-0.006	0.011	-0.027	0.020	0.000	0.039	-0.010	-0.009	-0.013
Always care	-0.026	0.004	0.006	0.006		0.023	0.028	0.013	0.039	0.002	-0.015	0.018	-0.002	-0.012
Selflessly serve others	-0.023	0.015	-0.007	-0.006	0.023		-0.008	0.028	-0.023	-0.004	-0.025	0.019	-0.034	0.035
Work for little compensation or reward	-0.023	0.001	-0.049	0.011	0.028	-0.008		-0.034	-0.001	0.021	0.058	-0.044	-0.022	-0.017
Never complain	-0.025	0.030	0.078	-0.027	0.013	0.028	-0.034		0.038	0.003	-0.013	0.023	-0.030	-0.001
Not work as subordinates	-0.053	0.005	0.003	0.020	0.039	-0.023	-0.001	0.038		0.010	0.025	0.079	-0.033	-0.004
Lead others	-0.014	0.010	-0.020	0.000	0.002	-0.004	0.021	0.003	0.010		0.001	-0.003	0.010	0.001
Not think about the financial rewards of their job	0.005	-0.037	0.014	0.039	-0.015	-0.025	0.058	-0.013	0.025	0.001		0.031	0.057	-0.046
Remain Seen	-0.070	0.033	0.049	-0.010	0.018	0.019	-0.044	0.023	0.079	-0.003	0.031		-0.016	0.003
Provide emotional support to others	0.059	-0.012	-0.022	-0.009	-0.002	-0.034	-0.022	-0.030	-0.033	0.010	0.057	-0.016		-0.024
Think critically	0.037	-0.012	0.047	-0.013	-0.012	0.035	-0.017	-0.001	-0.004	0.001	-0.046	0.003	-0.024	

\*Residuals are computed between observed and reproduced correlations. There are 7 (7.0%) non-redundant residuals with absolute values greater than 0.05.

## Appendix R: Physician Item Correlation Matrices

**Table R1**

*Physician Item Correlation Matrix*

	Feel called to their work	Be angelic in their work	Never get angry	Feel their work is divine	Always care	Selflessly serve others	Never complain	Not work as subordinates	Lead others	Be stoic	Not be intimidating	Be self-sufficient in their work	Seek assistance with their work	Focus on financial aspects of their job	Not think about the financial rewards of their job	Remain seen	Not give orders and directives without input	Provide emotional support to others	Think critically
Feel called to their work	1.000	0.311	0.095	0.371	0.382	0.355	0.140	0.000	0.179	0.054	0.057	0.157	0.158	0.101	0.110	0.014	0.044	0.219	0.164
Be angelic in their work	0.311	1.000	0.233	0.477	0.357	0.463	0.313	-0.150	0.031	-0.057	0.153	-0.010	0.150	0.173	0.217	-0.092	0.055	0.389	0.044
Never get angry	0.095	0.233	1.000	0.214	0.330	0.303	0.436	-0.134	0.099	0.109	0.147	0.074	-0.013	0.226	0.254	-0.015	0.000	0.220	-0.023
Feel their work is divine	0.371	0.477	0.214	1.000	0.306	0.336	0.221	0.002	0.020	0.114	-0.091	0.018	0.044	0.011	0.041	-0.004	-0.062	0.100	0.036
Always care	0.382	0.357	0.330	0.306	1.000	0.549	0.276	-0.081	0.168	0.037	0.248	0.121	0.085	0.232	0.193	0.059	0.129	0.501	0.231
Selflessly serve others	0.355	0.463	0.303	0.336	0.549	1.000	0.354	-0.130	0.059	0.066	0.163	0.105	0.096	0.208	0.211	-0.013	0.095	0.385	0.114
Never complain	0.140	0.313	0.436	0.221	0.276	0.354	1.000	-0.070	0.025	0.115	0.102	0.103	-0.052	0.094	0.232	-0.059	-0.046	0.194	-0.032
Not work as subordinates	0.000	-0.150	-0.134	0.002	-0.081	-0.130	-0.070	1.000	0.080	0.028	-0.220	0.113	-0.213	-0.137	-0.170	0.357	-0.161	-0.261	0.063
Lead others	0.179	0.031	0.099	0.020	0.168	0.059	0.025	0.080	1.000	0.203	-0.014	0.360	-0.065	0.033	0.023	0.163	-0.200	0.111	0.322
Be stoic	0.054	-0.057	0.109	0.114	0.037	0.066	0.115	0.028	0.203	1.000	-0.323	0.190	-0.195	-0.078	0.025	0.073	-0.256	-0.123	0.083
Not be intimidating	0.057	0.153	0.147	-0.091	0.248	0.163	0.102	-0.220	-0.014	-0.323	1.000	-0.099	0.251	0.300	0.179	-0.007	0.355	0.364	0.006
Be self-sufficient in their work	0.157	-0.010	0.074	0.018	0.121	0.105	0.103	0.113	0.360	0.190	-0.099	1.000	-0.152	-0.028	0.049	0.101	-0.174	0.029	0.240
Seek assistance with their work	0.158	0.150	-0.013	0.044	0.085	0.096	-0.052	-0.213	-0.065	-0.195	0.251	-0.152	1.000	0.044	-0.002	-0.089	0.373	0.262	0.054
Focus on financial aspects of their job	0.101	0.173	0.226	0.011	0.232	0.208	0.094	-0.137	0.033	-0.078	0.300	-0.028	0.044	1.000	0.373	-0.011	0.168	0.245	0.015

Not think about the financial rewards of their job	0.110	0.217	0.254	0.041	0.193	0.211	0.232	-0.170	0.023	0.025	0.179	0.049	-0.002	0.373	1.000	-0.091	0.081	0.214	-0.047
Remain seen	0.014	-0.092	-0.015	-0.004	0.059	-0.013	-0.059	0.357	0.163	0.073	-0.007	0.101	-0.089	-0.011	-0.091	1.000	-0.085	-0.048	0.188
Not give orders and directives without input	0.044	0.055	0.000	-0.062	0.129	0.095	-0.046	-0.161	-0.200	-0.256	0.355	-0.174	0.373	0.168	0.081	-0.085	1.000	0.271	-0.009
Provide emotional support to others	0.219	0.389	0.220	0.100	0.501	0.385	0.194	-0.261	0.111	-0.123	0.364	0.029	0.262	0.245	0.214	-0.048	0.271	1.000	0.125
Think critically	0.164	0.044	-0.023	0.036	0.231	0.114	-0.032	0.063	0.322	0.083	0.006	0.240	0.054	0.015	-0.047	0.188	-0.009	0.125	1.000

**Table R2**

*Physician Item Anti-Image Correlation Matrix*

	Feel called to their work	Be angelic in their work	Never get angry	Feel their work is divine	Always care	Selflessly serve others	Never complain	Not work as subordinates	Lead others	Be stoic	Not be intimidating	Be self-sufficient in their work	Seek assistance with their work	Focus on financial aspects of their job	Not think about the financial rewards of their job	Remain seen	Not give orders and directives without input	Provide emotional support to others	Think critically
Feel called to their work	.821 <sup>a</sup>	-0.054	0.096	-0.232	-0.166	-0.117	0.003	-0.055	-0.109	-0.009	0.010	-0.099	-0.142	-0.027	-0.043	0.028	-0.012	0.010	-0.031
Be angelic in their work	-0.054	.797 <sup>a</sup>	0.020	-0.378	0.035	-0.207	-0.129	0.023	-0.014	0.104	-0.022	0.054	-0.050	-0.036	-0.091	0.058	0.070	-0.216	-0.011
Never get angry	0.096	0.020	.795 <sup>a</sup>	-0.110	-0.139	-0.041	-0.315	0.073	-0.076	-0.064	-0.048	-0.015	0.005	-0.115	-0.086	-0.025	0.019	-0.011	0.080
Feel their work is divine	-0.232	-0.378	-0.110	.714 <sup>a</sup>	-0.134	-0.055	-0.017	-0.023	0.056	-0.064	0.136	0.051	-0.024	0.048	0.072	-0.018	0.033	0.120	0.028
Always care	-0.166	0.035	-0.139	-0.134	.820 <sup>a</sup>	-0.302	-0.023	-0.049	-0.036	-0.032	-0.107	-0.001	0.078	-0.044	-0.003	-0.037	-0.040	-0.309	-0.152
Selflessly serve others	-0.117	-0.207	-0.041	-0.055	-0.302	.868 <sup>a</sup>	-0.145	0.043	0.074	-0.065	0.003	-0.061	-0.006	-0.052	-0.015	-0.016	-0.029	-0.066	-0.016
Never complain	0.003	-0.129	-0.315	-0.017	-0.023	-0.145	.792 <sup>a</sup>	-0.039	0.058	-0.078	-0.070	-0.064	0.063	0.080	-0.097	0.052	0.056	-0.020	0.050
Not work as subordinates	-0.055	0.023	0.073	-0.023	-0.049	0.043	-0.039	.695 <sup>a</sup>	-0.030	0.103	0.123	-0.058	0.122	0.021	0.069	-0.335	-0.003	0.148	0.004



Lead others	-0.109	-0.014	-0.076	0.056	-0.036	0.074	0.058	-0.030	.682 <sup>a</sup>	-0.133	-0.055	-0.246	-0.005	-0.023	0.008	-0.067	0.176	-0.095	-0.217
Be stoic	-0.009	0.104	-0.064	-0.064	-0.032	-0.065	-0.078	0.103	-0.133	.709 <sup>a</sup>	0.261	-0.057	0.064	0.023	-0.052	-0.059	0.081	0.061	-0.025
Not be intimidating	0.010	-0.022	-0.048	0.136	-0.107	0.003	-0.070	0.123	-0.055	0.261	.781 <sup>a</sup>	0.043	-0.087	-0.156	-0.032	-0.093	-0.181	-0.113	0.030
Be self-sufficient in their work	-0.099	0.054	-0.015	0.051	-0.001	-0.061	-0.064	-0.058	-0.246	-0.057	0.043	.747 <sup>a</sup>	0.097	0.047	-0.051	0.003	0.053	-0.023	-0.137
Seek assistance with their work	-0.142	-0.050	0.005	-0.024	0.078	-0.006	0.063	0.122	-0.005	0.064	-0.087	0.097	.740 <sup>a</sup>	0.065	0.056	0.015	-0.258	-0.121	-0.067
Focus on financial aspects of their job	-0.027	-0.036	-0.115	0.048	-0.044	-0.052	0.080	0.021	-0.023	0.023	-0.156	0.047	0.065	.784 <sup>a</sup>	-0.289	-0.025	-0.064	-0.031	-0.005
Not think about the financial rewards of their job	-0.043	-0.091	-0.086	0.072	-0.003	-0.015	-0.097	0.069	0.008	-0.052	-0.032	-0.051	0.056	-0.289	.793 <sup>a</sup>	0.044	-0.023	-0.035	0.062
Remain seen	0.028	0.058	-0.025	-0.018	-0.037	-0.016	0.052	-0.335	-0.067	-0.059	-0.093	0.003	0.015	-0.025	0.044	.608 <sup>a</sup>	0.035	-0.010	-0.126
Not give orders and directives without input	-0.012	0.070	0.019	0.033	-0.040	-0.029	0.056	-0.003	0.176	0.081	-0.181	0.053	-0.258	-0.064	-0.023	0.035	.770 <sup>a</sup>	-0.121	-0.027
Provide emotional support to others	0.010	-0.216	-0.011	0.120	-0.309	-0.066	-0.020	0.148	-0.095	0.061	-0.113	-0.023	-0.121	-0.031	-0.035	-0.010	-0.121	.831 <sup>a</sup>	-0.017
Think critically	-0.031	-0.011	0.080	0.028	-0.152	-0.016	0.050	0.004	-0.217	-0.025	0.030	-0.137	-0.067	-0.005	0.062	-0.126	-0.027	-0.017	.720 <sup>a</sup>

**Table R3**

*Physician Item Residual\**

	Feel called to their work	Be angelic in their work	Never get angry	Feel their work is divine	Always care	Selflessly serve others	Never complain	Not work as subordinates	Lead others	Be stoic	Not be intimidating	Be self-sufficient in their work	Seek assistance with their work	Focus on financial aspects of their job	Not think about the financial rewards of their job	Remain seen	Not give orders and directives without input	Provide emotional support to others	Think critically
Feel called to their work		-0.021	-0.042	0.032	0.012	0.007	-0.016	0.022	0.017	-0.001	0.001	0.036	0.035	0.041	0.052	-0.029	0.006	-0.046	-0.029
Be angelic in their work	-0.021		-0.040	0.045	-0.064	0.006	0.013	0.010	0.035	-0.059	0.009	-0.007	-0.006	0.016	0.034	-0.007	-0.054	0.048	0.011
Never get angry	-0.042	-0.040		0.034	0.018	-0.027	0.081	-0.014	0.028	0.019	0.011	-0.012	0.050	-0.011	-0.038	0.025	0.019	-0.011	-0.006
Feel their work is divine	0.032	0.045	0.034		-0.007	-0.048	-0.031	-0.015	0.017	0.005		-0.015	0.001	0.026	0.001	0.018	0.000	-0.041	0.001
Always care	0.012	-0.064	0.018	-0.007		0.057	-0.018	-0.006	-0.039	0.021	-0.007	-0.029	-0.053	-0.017	-0.037	-0.008	0.006	0.057	0.019
Selflessly serve others	0.007	0.006	-0.027	-0.048	0.057		0.019	-0.008	-0.053	0.025	-0.019	0.014	-0.016	-0.006	-0.021	0.002	0.011	0.001	0.003
Never complain	-0.016	0.013	0.081	-0.031	-0.018	0.019		0.022	-0.016	0.004	0.032	0.031	0.024	-0.095	-0.025	-0.013	0.009	0.006	0.005
Not work as subordinates	0.022	0.010	-0.014	-0.015	-0.006	-0.008	0.022		0.009	-0.028	-0.028	0.024	-4.087E-05	0.000	0.013	0.006	0.021	-0.005	-0.020
Lead others	0.017	0.035	0.028	0.017	-0.039	-0.053	-0.016	0.009		-0.004	0.040	0.018	0.022	0.013	-0.003	0.000	-0.044	0.010	-0.001
Be stoic	-0.001	-0.059	0.019	0.005	0.021	0.025	0.004	-0.028	-0.004		-0.065	-0.026	0.021	0.003	0.019	0.043	0.036	-0.009	0.003
Not be intimidating	0.001	0.009	0.011	0.011	-0.007	-0.019	0.032	-0.028	0.040	-0.065		0.005	-0.002	0.001	-0.029	0.021	-0.012	-0.017	-0.015
Be self-sufficient in their work	0.036	-0.007	-0.012	-0.015	-0.029	0.014	0.031	0.024	0.018	-0.026	0.005		-0.017	-0.028	0.021	-0.035	0.018	-0.003	0.005
Seek assistance with their work	0.035	-0.006	0.050	0.001	-0.053	-0.016	0.024	-4.087E-05	0.022	0.021	-0.002	-0.017		-0.027	-0.004	0.017	0.063	-0.003	0.008
Focus on financial aspects of their job	0.041	0.016	-0.011	0.026	-0.017	-0.006	-0.095	0.000	0.013	0.003	0.001	-0.028	-0.027		0.130	0.006	0.006	-0.033	0.011
Not think about the	0.052	0.034	-0.038	0.001	-0.037	-0.021	-0.025	0.013	-0.003	0.019	-0.029	0.021	-0.004	0.130		-0.016	0.013	-0.019	-0.011

financial rewards of their job																			
Remain seen	-0.029	-0.007	0.025	0.018	-0.008	0.002	-0.013	0.006	0.000	0.043	0.021	-0.035	0.017	0.006	-0.016		-0.009	0.007	0.025
Not give orders and directives without input	0.006	-0.054	0.019	0.000	0.006	0.011	0.009	0.021	-0.044	0.036	-0.012	0.018	0.063	0.006	0.013	-0.009		-0.005	0.013
Provide emotional support to others	-0.046	0.048	-0.011	-0.041	0.057	0.001	0.006	-0.005	0.010	-0.009	-0.017	-0.003	-0.003	-0.033	-0.019	0.007	-0.005		-0.019
Think critically	-0.029	0.011	-0.006	0.001	0.019	0.003	0.005	-0.020	-0.001	0.003	-0.015	0.005	0.008	0.011	-0.011	0.025	0.013	-0.019	

\*Residuals are computed between observed and reproduced correlations. There are 13 (7.0%) non-redundant residuals with absolute values greater than 0.05.

## Appendix S: Item Communalities

**Table S1**

*Nursing Faculty Item Communalities*

	Initial	Extraction
Feel called to their work	0.319	0.362
Be angelic in their work	0.477	0.552
Never get angry	0.501	0.489
Feel their work is divine	0.353	0.430
Always care	0.399	0.495
Selflessly serve others	0.461	0.519
Work for little compensation or reward	0.510	0.648
Never complain	0.557	0.589
Not work as subordinates	0.406	0.413
Lead others	0.370	0.579
Be stoic	0.271	0.297
Not be intimidating	0.214	0.359
Not think about the financial rewards of their job	0.427	0.428
Remain seen	0.374	0.414
Not give orders and directives without input	0.211	0.280
Provide emotional support to others	0.269	0.316
Think critically	0.302	0.435

Extraction Method: Principal Axis Factoring.

**Table S2***Nursing Student Item Communalities*

	Initial	Extraction
Feel called to their work	0.334	0.369
Be angelic in their work	0.585	0.657
Never get angry	0.524	0.571
Feel their work is divine	0.487	0.744
Selflessly serve others	0.484	0.571
Work for little compensation or reward	0.353	0.360
Never complain	0.486	0.535
Not work as subordinates	0.471	0.535
Lead others	0.409	0.591
Be stoic	0.187	0.204
Not be intimidating	0.176	0.248
Be self-sufficient in their work	0.338	0.452
Not think about the financial rewards of their job	0.379	0.407
Remain seen	0.416	0.477
Not give orders and directives without input	0.230	0.405
Provide emotional support to others	0.192	0.216
Think critically	0.229	0.230

Extraction Method: Principal Axis Factoring.

**Table S3***Practicing Nurse Item Communalities*

	Initial	Extraction
Feel called to their work	.283	.302
Be angelic in their work	.642	.760
Never get angry	.611	.627
Feel their work is divine	.581	.736
Always care	.433	.648
Selflessly serve others	.495	.555
Work for little compensation or reward	.504	.569
Never complain	.641	.674
Not work as subordinates	.552	.598
Lead others	.334	.719
Not think about the financial rewards of their job	.498	.514
Remain seen	.337	.331
Provide emotional support to others	.251	.297
Think critically	.301	.360

Extraction Method: Principal Axis Factoring

**Table S4***Physician Item Communalities*

	Initial	Extraction
Feel called to their work	.273	.325
Be angelic in their work	.426	.481
Never get angry	.297	.428
Feel their work is divine	.365	.537
Always care	.487	.557
Selflessly serve others	.433	.490
Never complain	.294	.382
Not work as subordinates	.235	.466
Lead others	.266	.431
Be stoic	.215	.287
Not be intimidating	.334	.482
Be self-sufficient in their work	.200	.288
Not focus on financial aspects of their job	.231	.252
Not think about the financial rewards of their job	.221	.254
Remain seen	.182	.337
Not give orders and directives without input	.234	.318
Provide emotional support to others	.417	.490
Think critically	.192	.302

Extraction Method: Principal Axis Factoring.

## Appendix T: Comparison of Items Loaded Between Identities

**Table T1**

*Comparison of Loaded Items for Foundational Values Factor – All Archetypes*

	Nursing Faculty	Nursing Student	Practicing Nurse	Physician
Work for little compensation or reward	0.858	0.560	0.809	
Not think about the financial rewards of their job	0.622	0.593	0.669	
Never complain	0.595	0.730	0.762	
Selflessly serve others	0.502	0.527	0.308	
Never get angry	0.437	0.706	0.759	
Always care	0.392			
Not work as subordinates	-0.332	-0.568	-0.670	
Remain seen		-0.536	-0.541	
Be stoic		0.426		
Not focus on financial aspects of their job				

**Table T2**

*Comparison of Loaded Items for Modern Roles Factor - All Archetypes*

	Nursing Faculty	Nursing Student	Practicing Nurse	Physician
Lead others	0.764	0.707	0.880	0.634
Think critically	0.675	0.488	0.558	0.510
Be self-sufficient		0.536		0.466
Provide emotional support to others		0.385		
Not work as subordinates		0.303		



**Table T3***Comparison of Loaded Items for Professional Interactions Factor – All Archetypes*

	Nursing Faculty	Nursing Student	Practicing Nurse	Physician
Not be intimidating	0.594	0.494		-0.633
Not give orders and directives without input	0.458	0.623		-0.533
Remain seen	0.359			
Be stoic	-0.302			0.486
Provide emotional support to others				-0.403

**Table T4***Comparison of Loaded Items for Intrinsic Motivation Factor - All Archetypes*

	Nursing Faculty	Nursing Student	Practicing Nurse	Physician
Feel their work is divine	-0.672	-0.932	0.880	0.744
Be angelic in their work	-0.629	-0.639	0.797	0.616
Feel called to their work	-0.540	-0.461	0.372	0.511
Provide emotional support to others	-0.366			
Always care	-0.320			0.462
Selflessly serve others	-0.312			0.520