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AN INVESTIGATION OF ANTI-INTELLECTUALISM AMONG NURSES

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by

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ABSTRACT

Anti-intellectualism is often offered as an explanation for irrational actions, especially in the grips of uncertainty. The effects of the COVID-19 pandemic have uncovered the consequences of anti-intellectualism within the healthcare system. Nurses, the most identifiability trusted healthcare professionals, have been used to illustrate a healthcare paradox regarding COVID-19. The healthcare paradox presents nurses as highly trained healthcare professionals who do not believe in their own science and reject scientific expertise. Furthermore, nursing anti-intellectualism has been used to spread misinformation during a major health crisis. Yet, we do not know the depth in which anti-intellectualism exists within the nursing profession. Very little empirical research has been done on anti-intellectualism with even less scholarly work done within the nursing profession.

Therefore, the purpose of this study was to determine the depth in which anti-intellectualism exists among a group of practicing nurses, and if relationships and predictors exist between intrinsic factors, pertaining to demographic variables, and anti-intellectualism. The quantitative study utilized a descriptive, correlational design based on Hofstadter's (1963) work on anti-intellectualism. Demographic data and anti-intellectualism levels, quantified by an Intellect-Anti-Intellectualism Scale (IAIS), were collected through 639 online surveys. The study population included American nurses, who have practiced within the past two years, after completing all requirements for licensure. Nurses were recruited through various social media sites over a 6-week period, and data were analyzed using descriptive, correlational, and regression statistics methods. Statistical tests included frequencies, cross tabulation, bivariate analyses, and binary

logistics regression analyses, which were performed to identify independent variables on the dependent variable, anti-intellectualism. Quantitative data identified the existence of anti-intellectualism among a group of practicing nursing and correlations between anti-intellectualism and (a) age, (b) U. S. location, (c) additional non-nursing degrees, (d) religiosity, (e) political party affiliation, and (f) information obtainment for healthcare trends. The findings are significant regarding nursing anti-intellectualism and provide insight into the existence of anti-intellectualism within the nursing profession.

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DEDICATION

To my spouse, you are the best partner I could ask for. Through this experience, I have realized how rare and admirable of a person you are, and I am thankful for all your *big brain* full of wisdom and guidance. This entire process would not have happened without you.

To my children, the three coolest kids I know, my life is better because of you. Though you probably were not fully aware of what I have been doing all these years, I am so grateful for your sacrifice, patience, and understanding during this process. You have brought joy during the tough moments and always fill me with pride.

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LIST OF ABBREVIATIONS

AACN	American Association of Critical-Care Nurses
AANP	American Association of Nurse Practitioners
ADN	Associates of Nursing Degree
ANA	American Nurses Association
APRN	Advanced Practicing Nurse
BSN	Bachelor of Science in Nursing
CDC	Centers for Disease Control and Prevention
CINAHL	Cumulative Index to Nursing and Allied Health Literature
DNAP	Doctor of Nursing Anesthesia Practice
DNP	Doctor of Nursing Practice
EBSCOhost	Elton B. Stephens Company
IAIS	Intellect-Anti-Intellectualism Scale
IRB	Institutional Review Board
LPN	Licensed Practical Nurse
LVP	Licensed Vocational Nurse
MSN	Master of Science in Nursing
NCSBN	National Council of State Boards of Nursing
NSCG	National Survey of College Graduates

PEO	Population, Exposure, and Outcome
PhD	Doctor of Philosophy
PN	Practical Nurse
PRN	Pro re nata
RN	Registered Nurse
SAIS	Student Anti-Intellectualism Scale
SPSS	Statistical Package for the Social Sciences
USM	The University of Southern Mississippi
U.S.	United States

CHAPTER I – RESEARCH PROBLEM

Introduction

Anti-intellectualism is a term that is often found in politics and religion; however, it has seeped its way into other major aspects of American life. Anti-intellectualism is not a lack of intelligence but the minimization of intellectual value (Hofstadter, 1963). Anti-intellectualism is influenced by the social constructs of American society, and the social constructs of health are not immune from the anti-intellectual virus. The healthcare system is riddled with anti-intellectual ideas and practices.

In recent years, the term, anti-intellectualism, has begun to crop up in nursing research. However, the conversation is often unhelpfully vague. The research addresses anti-intellectualism in one of two ways—anti-intellectualism is seen as an insidious, amorphous idea discussed conceptually, or is discussed as a problem or an unidentified phenomenon with examples of anti-intellectualism.

Nursing researchers have analyzed the presence of anti-intellectualism within nursing education, but, to date, nursing scholars have not collected meaningful empirical evidence. One, non-nursing, quantitative study has identified high levels of anti-intellectualism among nursing students (Laverghetta & Nash, 2010). According to the literature review, discussed in-depth within Chapter II, a fair amount of evidence exists indicating the presence of anti-intellectualism and shared risk factors for anti-intellectualism within the nursing profession. These shared anti-intellectual risk factors are both rooted in the history of nursing education and the profession but are also seen in modern nursing.

Problem Statement

Anti-intellectualism is generally defined as the distrust and skepticism of intellectual development by field experts. The pairing of nursing, a scientifically based field of study, and anti-intellectualism, commonly associated with the depreciation of science, seems incongruous. However, as COVID-19 vaccine mandates began to take effect for healthcare workers, nurses have made headlines. These headlines put a spotlight on nursing anti-intellectualism as American nurses reported their willingness to lose their jobs over individual liberties, political affiliations, and conspiracy theories.

According to the media, approximately 69% of health care workers, which includes nurses, are vaccinated in Louisiana's largest hospital system (WDSU Digital Team, 2021). In Virginia and Michigan, healthcare workers, mostly nurses, protested vaccine mandates (Al-Arshan, 2021). According to a representative of the Ohio Nurses Association, roughly 30% of nurses in the Cincinnati area are willing to quit their jobs due to vaccine mandates (Al-Arshan, 2021; Bella, 2021; DeMio, 2021). Data is limited on the number of nurses who will lose their jobs for not complying with vaccine mandates, as vaccine mandates have become overlooked or pushed back to the spring months of 2022. However, according to the Chicago Sun, Advocate Aurora Health, a Midwestern hospital system, has fired over 400 employees, the highest number of workers reported to date, for being unvaccinated (Chase & Dey, 2021). Another hospital, in North Carolina, has fired 175 healthcare workers and suspended 375 employees (Al-Arshan, 2021; Bella, 2021). The number of nurses within this group of healthcare workers is unknown. However, nurses are quoted in these news sources expressing their

willingness to leave their current positions due to the vaccine mandates placed by employers (Al-Arshan, 2021; Bella, 2021).

As the vaccine mandates have begun to play out, legislatures and professional organizations have reacted. Organizations, including the American Association of Critical-Care Nurses (AACN, 2021), the American Nurses Association (ANA, 2021a), and the New York State Nurses Association (NYSNA, 2021), have published position statements unequivocally supporting COVID-19 vaccinations and dismissing frivolous exemption claims. Various nursing state boards have begun the process of sanctioning unvaccinated nurses, who refuse to receive the COVID-19 vaccinations (Botkins, 2021; Hollingsworth, 2022). However, the vaccination positions of hospitals and nursing organizations have largely become moot due to critical staffing shortages (Whelan & Evans, 2021). The repercussions of this conflict are pervasive. Nurses who refuse to comply with hospital policies regarding COVID-19 are often the focus of media attention, where they are given a national platform with which to spread misinformation (Rahman, 2021). Consequently, the tone and substance of policy and position statements, from the National Council of State Boards of Nursing (NCSBN, 2021b, 2021c) have shifted to focus on the dangers of said misinformation and the professional obligations of nurses to prevent its spread.

The media's attention on the nursing profession's anti-intellectualism has created an avenue for harmful propaganda, ultimately, putting the profession in an unfavorable light. Additionally, the nursing profession's gravitas has become a target for anti-intellectual actors. These anti-intellectual actors use the nursing profession and cite these public displays of nursing anti-intellectualism, to validate their own anti-intellectual ideas

and further spread anti-intellectual rhetoric. News articles are pointing to nurses' social media accounts as evidence of nursing anti-intellectualism over COVID-19 vaccinations and masking (Corrigan, 2021: Hauser, 2020)

Nursing pedagogy emphasizes evidence in the form of the scientific method and facilitates clinical reasoning skills based on the scientific process. Yet, practicing nurses' willingness to deny the science and lose their jobs as a consequence appears counter-intuitive, leading one to question their credibility. The nurses featured in these articles may or may not be outliers of the profession, but it remains unknown how deep the anti-intellectual sentiments run among nursing professionals. However, evidence in the research suggests that nursing students have high levels of anti-intellectualism though it is undetermined if this mindset is perpetuated by nursing education, nursing practice, or some other intrinsic factors. A gap in the available research has been identified regarding the existence of anti-intellectualism among practicing nurses from an empirical perspective. Therefore, the research aims of this study are to determine the degree of anti-intellectualism among a group of practicing nurses and the intrinsic factors that these nurses share. Additionally, this research hopes to gain insight into the intrinsic factors that influence anti-intellectualism among practicing nurses.

Research Question

The research questions for this study are:

RQ1: To what degree does anti-intellectualism exist in a group of practicing nurses?

RQ2: Are there significant relationships between demographic variables that correlated with anti-intellectualism among a group of practicing nurses?

RQ3: Which demographic data variables indicate a likelihood of anti-intellectualism among practicing nurses?

Purpose

The purpose of this study was to investigate the (a) degree of anti-intellectualism among a group of practicing, American nurses; (b) the demographic data, or intrinsic factors, practicing nurses possess, that correlate with anti-intellectualism, and (c) determine intrinsic factors that indicate a likelihood of anti-intellectualism among practicing nurses. Due to the lack of empirical evidence for anti-intellectualism among nurses, the study was quantitative. The study was rooted in descriptive, correlational research, and collected data using an anti-intellectual scale to determine the depth to which anti-intellectualism exists among practicing nurses. This study focused on practicing nurses who have completed their initial nursing education and have practiced within the past two years. Targeting practicing nursing for this research provided more insight into the inherent factors or commonalities at play.

Additionally, the study hoped to gain insight into any intrinsic factors that influence anti-intellectualism in nursing including the significance or correlations of demographic data. To determine whether anti-intellectualism is a problem within the nursing profession, the depth of and correlating factors associated with anti-intellectualism need to be identified through quantitative means. Moreover, determining factors that predict the risk of anti-intellectualism within the nursing profession helps the profession determine a way to combat its existence. Demographic data along with a scale that determines anti-intellectualism was collected. Participants were recruited through a large social media harvest, and the data was collected through online surveys over a six-

week period (King et al., 2014; Stokes et al., 2019). The study hypothesized that a significant level of anti-intellectualism would be identified and that significant relationships between demographic data and anti-intellectualism exists. Additionally, the study hypothesized that demographic variables pertaining to the education a nurse received affect a nurse's level of anti-intellectualism. Specific correlating factors for anti-intellectualism among nurses, theorized from the theoretical framework and empirical data, included political affiliations, religion, licensure for practice, and age. More details regarding the methodology of this research will be discussed in Chapter III.

Theoretical Framework

The framework for the research is Richard Hofstadter's (1963) analysis of anti-intellectualism in his work Anti-intellectualism in American Life. Hofstadter's analysis contains the socio-epistemological and historical perspective of anti-intellectualism. According to Eigenberger and Sealander (2001), Hofstadter's publication was the first scholastic analysis of anti-intellectualism from a sociological perspective. Further, Hofstadter's work is rooted in a sub-discipline of sociology regarding epistemology, also known as the sociology of knowledge (Rigney, 1991).

The sociology of knowledge is the socio-cultural foundation for an individual's knowledge development (McCarthy, 2013; Wolff, 1974). Simply put, the sociology of knowledge is the idea that an individual's knowledge is contextual to social structures like class, gender, ethnicity, religion, or culture, to name a few (McCarthy, 2013; Wolff, 1974). The sociology of knowledge is rooted in some of the sociological aspects of Karl Marx's, Max Weber's, and Emile Durkheim's early work; however, Karl Mannheim is considered the founder (as cited in McCarthy, 2013; Wolff, 1974). Mannheim sharpened

the theoretical aspects of sociological knowledge by applying the social aspects of Marx's, Weber's, and Durkheim's work to create a holistic perspective (as cited in McCarthy, 2013; Wolff, 1974). As sociological knowledge relates to Hofstadter's (1963) work, Hofstadter addresses specific social aspects that influence the perspective and value of knowledge, and how those social aspects preserve anti-intellectualism.

As Hofstadter's (1963) book traces the American history of intellectualism, he points to the social influence of religion, politics, business (or practical culture), and formal education as systems for perpetuating anti-intellectualism. Hofstadter (1963) identified four key components of anti-intellectualism that are influenced by the American social systems. These four components are anti-rationalism, anti-elitism, practicality, and the democratization of intellect (Hofstadter, 1963).

Anti-rationalism, anti-elitism, and practicality are the forms of anti-intellectualism that exist (Hofstadter, 1963). The democratization of intellect catalyzes anti-intellectualism and is the vector by which anti-intellectualism is spread (Hofstadter, 1963). Hofstadter (1963) states that anti-intellectualism took power when intellects began losing prominence in society. The first major influencing factor that antiquated the downfall of the intellect was American religious influences (Hofstadter, 1963).

According to Hofstadter (1963), the evolution of the American Protestant religion shaped the first form of anti-intellectualism via anti-rationalism. Anti-rationalism is not defined as philosophical anti-rationalism, but as a thought process that is "gravely inhibited", waned, or uncultured (Hofstadter, 1963, p. 9). The popularity of the evangelical spirit "diminished the role of rationality and learning" by promoting emotional understanding and experiences, over methodical, scholarly reasoning

(Hofstadter, 1963, p. 55). Anti-rationalist views do not value and outright reject ideas that contradict holy writs, therefore, placing limitations on intellectual development (Hofstadter, 1963). The charismatic leaders of the Evangelical wave gained favor over the formal clerical positions, traditionally composed of highly educated members that valued education and enlightenment (Hofstadter, 1963). Ideology spread that any follower of the faith could determine their own meaning of the Christian Bible, with the rising popularity of the evangelical creed (Hofstadter, 1963). In turn, these ideas lead to disregard and animosity toward those who had been trained to interpret the holy word making them an easy target for rejection (Hofstadter, 1963).

Along with this sweeping religious influence, fear-mongering about modern science was seen as a threat to the absolute truths of the faith (Hofstadter, 1963). The potential loss of rural American traditions to industrialization was also used to maintain followers (Hofstadter, 1963; Rigney, 1991). However, these methods encouraged anti-rational thoughts rooted in fear and disdain for the staleness of rationalism, which led to the first major wave of American anti-intellectualism. The spread of anti-intellectualism through absolutions and fundamentalism, in the name of the evangelical spirit, began to spill over into other aspects of American life and has become integrated into politics, economics, and education.

As America modernized, the Christian creed was used to tackle new social problems developed in government and economics as a means of "purify[ing] politics" from power inequality (Hofstadter, 1963, p. 197). Similar in form to the intellectual clergyman, the aristocratic politician became the next target for anti-intellectualism in the form of anti-elitism. Anti-elitism refers to the rejection of "intellect represented as a form

of power or privilege" (Hofstadter, 1963, p. 34). Anti-elitism comes from a populist view where the value of intellectual development is depleted by its association with privilege (Hofstadter, 1963).

At the time anti-intellectualism began to gain traction, politics and other hierarchical social structures were dominated by a group of elites, intellectual gentlemen. The aristocratic gentleman, who had the luxury to become an intellectual, was viewed as an out-of-touch elitist, and no longer had favor with the average person (Hofstadter, 1963). Eventually, "the rule of the patrician elite was supplanted by a popular democracy," yet suspension and disdain for this ruling class remained (Hofstadter, 1963, p. 146). The demands of the new complexities of the American government increased the desire for technocracy, which concluded the reign of the gentleman (Hofstadter, 1963). The use of experts began to gain favor in society out of necessity; however, they still bore the stain of mistrust and hostility from their predecessors—the American gentlemen (Hofstadter, 1963). Hofstadter (1963) looks to politics as the most powerfully disseminating vector for anti-intellectualism, though it heavily coincides with the American capitalistic tendencies and the mythos of the self-made man.

The effect of the American business sector has "brought the anti-intellectual movement more strength than any other force in society" (Hofstadter, 1963, p. 237). The dueling aphorisms—the philosophical outlook of intellectualism and the practicing class's value for monetized labor, plays out in American economics. American capitalism heavily fosters the production of anti-intellectual sentiments because of the system's inherent drive towards practical efficiency and propagation, and the internalization of the rags-to-riches story (Hofstadter, 1963). American business culture elicits "dissonance

between business enterprise and intellectual enterprise" due to their "different sets of values" (Hofstadter, 1963, p. 233). Immediate practical payoffs are deemed more valuable than intellectual endeavors and theoretical education; and in this sense, rationality is rewarded with capitalistic gain (Hofstadter, 1963).

The practical culture was also influenced by the popularity of the businessman with his pragmatic and capitalist achievements (Hofstadter, 1963). The notoriety of the businessman, with supposed rags-to-rich stories, were idolized for being self-made; in actuality, they had the advantage of class, connection, and education (Hofstadter, 1963). These practical business notions added to the years of budding resentment towards the privileged, and the previously established American folklore that formal knowledge was not always necessary for success (Hofstadter, 1963). However, the reality of the American bootstrap myth is that the self-made businessman needs some educational foundation to be successful. As Americans flocked to the bureaucratic business and economic sectors of the workforce, universities met these workforce sectors' demands for formal education to integrate more vocational training (Hofstadter, 1963). Universities began offering business degrees and other business-associated degrees like "engineering, accountancy, economics, and law" (Hofstadter, 1963, p. 262). As higher educational institutes moved from a liberal art focus to a more academically inclusive one, Hofstadter (1963) recognized that this shift was the beginning step toward academic anti-intellectualism.

Democratization of intellect is the utilitarian approach to education as a means of equalizing members of a democratic society (Hofstadter, 1963). The democratization of intellect is an equal opportunity for intellectual development through the American

education system (Hofstadter, 1963). Hofstadter (1963) views anti-intellectualism as a negative byproduct of this democratization and looks to the American educational systems for its perpetuation. According to Hofstadter (1963), anti-intellectualism exists in American education through the three forms discussed above. Each political, religious, and economic system has spread its own form of anti-intellectualism through the democratization of intellect. By providing formal education to all members of society, these forms influence intellectual development, and the value thereof (Hofstadter, 1963).

Though the idea of democratization of intellect is political in nature, the educational quest for equal opportunity and universality, itself, is part of the integration of religious morals. However, the notion of education for all was "not founded primarily upon a passion for the development of the mind...but rather upon the supposed political and economic benefits of an education" (Hofstadter, 1963, p. 305). The American educational system was "in favor of certain notions of spontaneity, democracy, and practicality" (Hofstadter, 1963, p. 362). The practical value placed on an educational approach is based on the ability to "be measur[ed] by the number of immediate, actual life situations to which it directly applies" (Hofstadter, 1963, p. 346). These ideals of practicality and democracy trickled through the educational systems, and are found in the higher educational, primary, and secondary systems, but the concept plays out across all educational systems.

Higher education sets the standards for the lower educational systems by placing obligations of academic rigor. The primary and secondary educational systems are responsible for producing university-ready students. However, primary and secondary educational systems also have the responsibility to meet the needs of all of those who are

served—all children who are legally required to attend school. The juxtaposition of these two educational goals creates a conflicting academic system that cannot meet all the needs of its students (Hofstadter, 1963). Therefore, educational systems create a one-size-fits-all system that focuses on utility, and utility is measured through practicality and democracy (Hofstadter, 1963). The integration of practicality and democracy manifested into a focus on child-centered growth (Hofstadter, 1963). Child-centered growth recognized that all students were not meant for scholastic achievement or would not meet the meritocratic nature of higher education (Hofstadter, 1963). Child-centered growth focuses on academic nurturing, which focuses on an individual's intellectual capacities and fostering self-improvement (Hofstadter, 1963). Hofstadter (1963) states that the practical approach for this form of education is not bad, but it lacks rigorous standards for intellectual development and leads to intellectual confinement.

Further, Hofstadter (1963) raises concerns about the influences of individual, political, religious, and financial buy-in on the American education systems. The educational system is a social institution that is directly influenced by the resources, including financial incentives, provided by other social systems (Hofstadter, 1963). These influencing social systems come with their own form of anti-intellectualism, and these forms of anti-intellectualism migrate their way into the educational systems' structure, ideals, and outcomes (Hofstadter, 1963). Ultimately, the reliance of the educational system on the religious, political, and business sectors of the American social systems causes American education to become an agent of anti-intellectualism that feeds upon itself (Hofstadter, 1963).

Operational Definitions

These operational definitions were used to provide a clear understanding of the terms utilized in this research. The following is a list of key elements addressed and explored within this study. The operational definitions also include major concepts addressed within the framework.

Anti-Intellectualism

Hofstadter (1963) discusses the concept of anti-intellectualism, in-depth, from a political and psychosociological perspective. Hofstadter's (1963) book does not positively define anti-intellectualism, but instead, leaves the reader to understand that anti-intellectualism is the foil of intellectualism, which he does define. Lacking a concrete definition of such an important term, the trend, rooted in the literature, is to use the following, "resentment of the life of the mind, and those who are considered to represent it; and a disposition to constantly minimize the value of that life," to describe anti-intellectualism (Hofstadter, 1963, p. 7). Intellect differs from intelligence (Hofstadter, 1963). Intellect was defined here as the "critical, creative, and contemplative side of the mind" that is used for evaluation and meaning from a holistic perspective (Hofstadter, 1963, p. 25). Intellect "theorizes, criticizes, and imagines[s]" (Hofstadter, 1963, p. 25). Where intelligence works to grasp concepts based on "immediate meaning in a situation and evaluate it" through manipulation, and adjustment (Hofstadter, 1963, p. 25). Intellectualism and anti-intellectualism were measured with the intellectualism-anti-intellectual scale (IAIS). The IAIS assesses variations in a person's values for intellectual interests (Marques et al., 2017). For this study, the operational definition for anti-intellectualism and intellectualism were scores based on the IAIS, a 10-item Likert scale

questionnaire. Lower scores indicated anti-intellectualism, and higher scores indicated intellectualism.

Nurse

A nurse is defined as any person who has graduated from an accredited nursing school or program and has obtained licensure from the National Council of State Boards of Nursing (NCSBN). The nursing profession is the collective of professional nurses who specialize in the body of knowledge and skill sets pertaining to nursing practice.

Nursing Anti-Intellectualism

This research aimed to gain insight into nursing anti-intellectualism; therefore, a definition of nursing anti-intellectualism is not clearly understood or defined. However, the research operated under the following definition to begin the dissertation process. Nursing anti-intellectualism is a licensed nurse who does not value or resent intellectual development based on lower IAIS scores.

Demographics

Demographic variables were measured to determine intrinsic factors of nursing anti-intellectualism. Demographics is data that describes a specific population. Intrinsic factors are defining characteristics of an individual. The demographic variables and the correlating operational definition are listed in Table 1.

Table 1

Operational Definition for Demographic Variables

Variable	Operational Definition
Age	Number of years alive
Gender identity	Sense of self as male (0), female (1), non-binary (2), transgender (3), preferred not to answer (4) *
Ethnicity	Identified social groups based on race and culture as White or Caucasian (0), Black or African American (1), American Indian or Alaskan Native (2), Asian (3), Native Hawaiian or pacific islander (4), Hispanic, Latino, or Spanish (5), multiple ethnicities (6)
Marital status	Determinants of a legal union as single (never married) (0), married or in a domestic partnership (1), widowed (2), divorced (3), separated (4)
Members of Household	Number of people living in the home
Income	Dollar amount of work-related pay $10,000 to 19,999 (0), $20,000 to 29,999 (1), $30,000 to 39,999 (2), $40,000 to 49,999 (3), $50,000 to 59,999 (4), $60,000 to 69,999 (5), $70,000 to 79,999 (6), $80,000 to 89,999 (7), $90,000 to 99,999 (8), $100,000 to 149,999 (9), $150,000 to $ 199,999 (10), $ 200,000 or more (11)
Income affected by Covid-19	determine if income was increased by COVID-19 pay rates by yes (1), or no (0)
Employment status	Determine current employment state by a unit of measurement equivalents full-time employment (0), part-time employment (1), PRN or Per diem (2), traveler/contract employee (3), retired (4), student only (5), self-employed (6), homemaker (7), unemployed looking for work (8), unemployed not looking for work (9), unable to work or disable (10)
Employment contracts	Number of contracted employment jobs per year
Leaving workforce	Determine if the participant will leave or has left the workforce by yes (1), or no (0)
Nursing licensure	Type of nursing licensure as PN/LPN/LVN (0), RN (1), APRN (2)
Nursing Degree	Licensed Practice Certification (0), Diploma in Nursing Science (1), Associate Degree in Nursing (2), Bachelor Degree in Nursing (3), Master Degree in Nursing (4), Master Degree in Nursing – Nurse Practice/Nurse Anesthesia (5), Doctorate of Nurse Practice (DNP) or Doctorate of Nurse Anesthesia Practice (DNAP) (6) Doctor of Philosophy in Nursing (7), Doctorate of Nursing Science (8)
Nursing specialties	Type of nursing practice area or area of experience
Current enrollment in school	currently enrolled in a higher education program to obtain any additional degrees by yes (1), or no (0) and type of degree
Other degrees	Type of non-nursing degree obtained from a high educational institute
Health insurance	health insurance reliance is contingent on the nursing job by yes (1), or no (0)
Location/residency	Geographical location category

Table 1 (continued).

Type of community	determine the density of the population of the residential community by rural area (0), small city or town (1), large city (2), suburb near a large city (3)
Community involvement	determine involvement and contribution to social, residential setting by yes (1), or no (0)
Degree of community involvement	Somewhat involved (0), moderately involve (1), very involved (2)
Political ideology	identify beliefs that pertain to public and governmental affairs associated with a U.S. social group of conservativisms (0), modernism (1), liberalism (2)
Political party affiliation	membership of political party as Republican (0), Libertarian (1), Green party (2), Constitutional party (3), Democratic (3), Independent (4), No party affiliation (5)
Religious affiliation	identify beliefs that pertain to the religious family of Asian Folk Religion (0), Hinduism (1), Judaism (2), Islam (3), Christianity, other (4), or not religious (5)
Christian religion affiliation	Identify beliefs that pertain to the common U.S. sub-religions of Christianity including Baptist (0), Pentecostal (1), Methodist (2), Anglican (3), Catholic (4), Presbyterian (5), Episcopalian (6), Lutheran (7), non-denominational (8)
Religious level	depth of religious beliefs not religious (0), slightly religious (1), moderately religious (2), very religious (3), don't know (4)

Note: The demographic variables are measured by questions from a survey questionnaire. *(Centers for Disease Control and Prevention [CDC], 2019, para. 8).

Assumptions and Limitations

The research assumed that anti-intellectualism exists within the nursing profession. This research aimed to determine the degree of its existence and then provide more insight into its character. Determining the degree of anti-intellectualism among nurses was the first component of this research. If anti-intellectualism was not found to be statistically significant, the other components of this research would become moot. However, based on the extensive research on this topic in other disciplines, a likelihood of anti-intellectualism does exist among practicing nurses.

Additionally, a common assumption among researchers is that all subjects are truthful and forthright in their answers and identity. Online recruitment and surveys for

data collection create an added cloak of anonymity. Therefore, the lack of contact between the researcher and the subject can create a lack of accountability and increase the likelihood of false information.

The most significant limitation of this research is the effects of the COVID-19 pandemic on practicing nurses. According to Hofstadter (1963), “few intellectuals are without moments of anti-intellectualism” (p. 21). This study hoped and assumed that the burden of the current state of the healthcare systems and the exhaustion that nurses were experiencing did not lead to nursing participants having momentary lapses in judgment when completing the research survey. Furthermore, nurses who teeter the line or are already burnt out from the pandemic are less likely to complete a survey about the nursing profession as nurses are overwhelmed and exhausted, which can affect study participation.

Lastly, this research assumes that the public display of anti-scientific ideas from nurses is influenced by anti-intellectualism, not misinformation. Nurses are armed with the tools to protect themselves from misinformation through nursing education. The problem occurs when anti-intellectualism causes nurses to throw down these tools, disarming themselves.

Significance

Anti-intellectualism affects nursing on a professional and individual level, and nursing anti-intellectualism impacts those who interact with members of the profession. Therefore, determining the depth of anti-intellectualism among nurses, and the intrinsic factors associated with anti-intellectualism, provides insight into combating nursing anti-intellectualism and its effects. Combating nursing anti-intellectualism is key to the

profession's influence and future development, including those within the profession and those which the profession affects.

Prevailing anti-intellectualism impedes the development of nursing as an academic discipline. Questioning and disregarding the foundational knowledge of the nursing profession indicates a lack of value for the intellectual development of the profession. By undervaluing research and academic pursuit, limitations are placed on the development of nursing knowledge. The generation of knowledge advances the profession and legitimizes its academic relevance.

Not only does nursing anti-intellectualism affect the development of the nursing profession but also the safety of practicing nurses. The science used to determine the safety of health interventions is foundational to a nurse's practice. Nurses who do not value or deny scientific evidence in their own health care decisions create higher health risks for themselves and those to which they provide care. Presently, the effects of anti-intellectualism can jeopardize a nurse's safety, as they choose to not protect themselves from an infectious disease that has reached pandemic proportions.

According to the Centers for Disease Control and Prevention (CDC), as of July 2021, the percentage of nurses who were fully vaccinated is among the lowest of healthcare providers (Lee et al., 2021). Vaccination coverages for nurses are approximately 56.7% (Lee et al., 2021). Nursing vaccination coverage is lower than physicians, advanced practice providers, therapists, and ancillary service employees (Lee et al., 2021).

Additionally, the American Nurses Association (ANA, 2021b) conducted a survey asking nurses if they would voluntarily get the COVID-19 vaccine. The ANA

(2021b) survey resulted in 36% of nurses saying “no” to voluntary COVID vaccinations, and 31% indicating that they were “unsure”. The data by the CDC and ANA is concerning, as nurses have the most patient contact and are the primary sources for patient education (Lee et al., 2021; ANA, 2021b). Furthermore, the ANA (2021b) found that 44% of nurses do not feel comfortable discussing the COVID-19 vaccine with patients, though 70% feel knowledgeable about the vaccine. The ANA (2021b) survey indicated that less than 50% of the nursing participants obtained COVID-19 vaccine information from a reputable source, disclosing that 63% obtain their knowledge through mainstream media, and 13% from social media (ANA, 2021b). The ANA (2021b) data indicate a significant problem regarding the safety of those who receive care from nurses. Without the vaccine and mask mandates, an unvaccinated, or unmasked, a nurse can become a vector for spreading COVID-19 to their patients, family members, and the public. The effect of nursing anti-intellectualism can be hazardous to society through the nurse’s personal choices and professional influence.

As a profession, nursing influences society both within and outside of patient care. Due to the sheer number of nurses in America, they are easily accessible by the public and, typically, have the most contact with the public. According to the NCSBN (2020), in the Fall of 2019, there are approximately 4,096,607 registered nurses, and 920,655 LPN/LVNs in the United States (NCSBN, 2020). The American Association of Nurse Practitioners (AANP) (2020) indicates that there are approximately 325,000 licensed advanced practice registered nurses (APRNs). The view of nursing by the public is generally very positive, and for nearly two decades, nurses have maintained the highest-ranked profession in honesty and ethics (Saad, 2020). According to a Gallup poll,

the profession rose 4 percentage points from previous years, receiving the highest record of public trust to date at 89% (Saad, 2020). The trust that nursing has developed with the public creates a sense of connection; however, that trust can become compromised by the spread of anti-intellectualism.

The public display of anti-intellectualism among nurses on both news and social media platforms can spread anti-intellectual ideas among members of the profession. Nurses publicly buying into conspiracy theories and advocating against the existence of COVID-19, mandated masking, and COVID-19 vaccinations create a microcosm of acceptable anti-intellectual beliefs that spread like a virus. The spread of anti-intellectualism infects more members of the profession, it becomes transmitted to the public. What cache nurses have accrued of honesty, trust, and credibility can directly champion causes that lead to people dying. The nursing profession's reputation allows for public influence, and members of the public are likely to be swayed by the anti-intellectual ideals of a nurse within their social circle. As with nursing practice, a nurse's influence can determine health outcomes, and in a pandemic, a nurse's anti-intellectual influences, outside of their practice, can become a matter of life or death. As some members of society can become swayed by a nurse's anti-intellectual ideas, others start to question the integrity of the profession. Anti-intellectualism among nurses can damage the rapport and trust that the nursing profession has developed with the public. If anti-intellectualism continues to spread through the profession and continues to become popularized through media outlets, nursing can suffer irreparable damage to its reputation.

Summary

Anti-intellectualism among nursing professionals is not fully understood. Therefore, the goal of this study was to learn more information about anti-intellectualism among practicing nurses. The literature discussed in Chapter II addresses anti-intellectualism within nursing, but there is limited data currently available. The prevalence and factors associated with anti-intellectualism among practicing nurses are unknown. This study started with the foundation and attempted to determine the depth of anti-intellectualism among nursing professionals and the factors associated with it. Furthermore, to potentially combat the deterrents associated with anti-intellectualism, the research looked at predictive intrinsic factors associated with anti-intellectualism. Being able to predict anti-intellectualism as an outcome of the identified intrinsic factors will better prepare and adequately educate stakeholders to intervene in the spread of anti-intellectualism among nurses. The details of this research are described in the following chapters. Chapter II, the literature review, discusses the understanding of the current research, and Chapter III describes the methods used for this research. Chapter IV describes the study's results, and Chapter V discusses those results.

CHAPTER II – REVIEW OF LITERATURE

Introduction

The literature review addresses anti-intellectualism associated with Hofstadter's analysis and anti-intellectualism within nursing. The review starts with the description of Richard Hofstadter's (1963) analysis of anti-intellectualism, in the book, *Anti-intellectualism in American Life*. Hofstadter's (1963) analysis serves as both a source and the framework for this research. The qualitative and quantitative literature addressed in this review is specific to the four major components of Hofstadter's (1963) analysis. The central tenets of Hofstadter's (1963) analysis influence the categorization and synthesis action of the literature pertaining to anti-intellectualism within the nursing profession. The review is organized by methodology and thematic theory. The research questions and methodology were influenced by the review of literature, along with the completion of a theory substruction based on Hofstadter's (1963) analysis.

Due to the nature and underpinnings of anti-intellectualism, most available research focuses on theoretical development and is analytical in nature. The theoretical research on anti-intellectualism overshadows the empirical. However, the empirical evidence of the quantitative literature discusses outcomes that are generally the same. The literature addresses quantitative data regarding anti-intellectualism, which included uses and modifications of the instrument that was utilized in this research.

The literature review section starts with the theoretical framework for this research. The sources for the review tapered in scope, ending with discussions of anti-intellectualism within the nursing discipline. The review section focuses on nursing research that addresses anti-intellectualism and its correlating concepts. Some of the

nursing research used the term anti-intellectualism, whereas other nursing articles address the concept of anti-intellectualism without directly using the term. With the limited availability of empirical data on anti-intellectualism in nursing, the discussed literature pertaining to nursing is primarily theoretical and philosophical and is a mix of scholarly opinions and analyses. The literature review is divided into the following sections: research strategies, analysis of anti-intellectualism, empirical literature, nursing research, and quantitative data regarding nursing anti-intellectualism.

Search Strategies

The research question for this dissertation does not pertain to intervention effectiveness, but rather, to determining intrinsic factors, or exposures that lead to an outcome – namely, the presence of anti-intellectualism in the field of nursing. The risk for anti-intellectualism among practicing nurses is based on social influences and education. Therefore, the research framework utilized for the dissertation is PEO, which stands for population, exposure, and outcome (Doody & Bailey, 2016). The PEO strategy focuses on a population's exposure or developmental likelihood of an outcome (Doody & Bailey, 2016). This framework was chosen to focus on (a) the nursing population; (b) the nurses' exposure to ideals of practicality, anti-elitism, and anti-rationalism within their practice and in nursing education; and (c) the outcome of anti-intellectualism.

This literature review includes both journal and non-journal articles, books, and some gray literature. Initial searches resulted in over 800 articles about Hofstadter's analysis of anti-intellectualism. Article selection was based on the subject matter that provided further insight into Hofstadter's analysis an anti-intellectualism and nursing anti-intellectualism. Hofstadter's book, about American anti-intellectualism, was the

primary source for this literature review. The gray literature includes published reports and data sets from the ANA and the CDC.

Additional article selection was influenced by the methods used, specifically, articles that focused on empirical research. Very little empirical research was found on anti-intellectualism. Less than 10 empirical articles were found. The literature review produced only five articles that directly addressed nursing anti-intellectualism and were relevant to this research. Terms like nursing anti-elitism, nursing anti-rationalism, nursing practicality, and the nurse theory-practice gap were used to obtain information about nursing anti-intellectualism. The primary research databases utilized for this review were CINAL, Sciencedirect, and EBSCOhost.

The review of literature provided a tool used to measure anti-intellectualism, and an explanation of that tool's implementation, history, reliability, and validity. The tool was needed to determine the degree of anti-intellectualism existing within a group of working nurses. The tool, the IAIS, is discussed in the literature and is used for this research. The articles reviewed present an authoritative justification and explanation for the research tool used in this study. The IAIS instrument was derived from important aspects of Hofstadter's (1963) anti-intellectualism analysis theory and examines the central principles of Hofstadter's analysis.

Additionally, the theoretical framework, Hofstadter's (1963) analysis, provided guidance in determining the intrinsic factors and the relationships that correlate with anti-intellectualism for working nurses. The theoretical framework determined the scope for the literature selection and those articles selected were compared to the central tenets of the theoretical framework. The gap identified in the literature review pertains to the

actual degree of anti-intellectualism among the nursing workforce, and the intrinsic factors that correlated with nursing anti-intellectualism. The literature reviewed does not identify quantifiable factors for nursing anti-intellectualism. However, the review found correlating components, based on the theoretical framework, that puts practicing nurses at risk for having anti-intellectual tendencies. With the evolution of modern nursing standards, practice, and education, the literature indicates elements of anti-intellectualism. The risk for nursing anti-intellectualism is found in the forms of anti-elitism, practicality, and anti-rationalism, all of which are likely propelled through the vector of formal nursing education.

Analysis of Anti-Intellectualism

Scholars began to take note of anti-intellectualism, as a concept, when the term was thrust into the spotlight with Hofstadter's (1963) book, *Anti-Intellectualism in American Life*. Anti-intellectualism can be found in the literature prior to Hofstadter's (1963) publication, despite its notoriety in the 1960s. However, the term anti-intellectualism remained vague until Broudy's (1954) analysis. According to Broudy (1954), anti-intellectualism is not part of philosophical or theoretical ideology, nor is it confined to a group's ideals (however there are associations), but rather, a strategic process for obtaining truths.

Daniel Rigney (1991) summarized and refined Hofstadter's (1963) work with an eye toward digestibility. Specifically, Rigney (1991) refined Hofstadter's (1963) analysis into three distinct subtypes of anti-intellectualism with clear definitions. Those subtypes are (a) anti-rationalism via piety, (b) populist anti-elitism, and (c) unreflective instrumentalism (Rigney, 1991).

Pious anti-rationalism places value on rejecting rational reasoning (Rigney, 1991). Anti-rationalist attitudes are derived from Protestantism, specifically evangelical or fundamentalist ideas and religious constructs (Rigney, 1991). Rigney (1991) explains the emotive relationships of anti-rationalism reasoning, associating rational, emotionless reason with cold feelings, and intuitive, emotional reasoning with warm feelings. Rigney (1991) further proposes that anti-intellectualism takes root due to the popular distaste for an emotionless reason, and its perceived conflict with the sanctities of absolute belief.

Rigney (1991), then addresses populist anti-elitism as it applies value to intellect. The value applied to intellect is of a negative sense and revolves around a mistrust of wisdom that intellect provides (Rigney, 1991). Rigney (1991) expounds on how a Jacksonian democracy fueled the wave of anti-elitism by giving a voice to the people while invoking anti-aristocratic sentiments. Moreover, Rigney (1991) also addresses the intellectual involvement of anti-elitist ideas.

Rigney (1991) coined the term unreflective instrumentalization, based on Hofstadter's work, as a means of providing a better working definition and a clear concept of anti-intellectualism. Unreflective instrumentalism is the "devaluation of forms of thought that do not promise relatively immediate practical payoffs" or pragmatic practicality (Rigney, 1991, p. 44). Essentially, Rigney (1991) focuses more on economic factors outside of a business, but as a maxim among the general population. Rigney (1991) indicates that this form of anti-intellectualism results in the idea that if intellectual development does not help gain capital, then it is not worth time or effort.

Further, Rigney's (1991) work addresses an aspect of anti-intellectualism that Hofstadter (1963) does not consider. Where Hofstadter (1963) looks to the American

educational systems as proliferating anti-intellectualism, Rigney (1991) points to mass media. Rigney (1991) states that the link between anti-intellectualism and mass communication both modernizes the concept and propagates it.

Other scholars have used Hofstadter and Rigney to evaluate anti-intellectualism presence in various applications and environments. For example, Cross (1990) addresses the relationships between the cult of practicality and the American tradition of being apprehensive of the intellect. Cross's (1990) cult of practicality correlated with Rigney's (1991) unreflective instrumentalism, but Cross looks to practicality as an unbreakable cultural influence instead of a capitalistic gain. Cross's work also heavily focuses on Hofstadter's (1963) concept of democratization of intellect but calls it the democratizing of knowledge. Cross (1990), like Hofstadter (1963), addresses the democratizing of knowledge from a historiographic perspective, but Cross places emphasis on higher education and adds the component of historical racial inequality to this form of anti-intellectualism. From Cross's (1990) standpoint, the dichotomy of the American perspective on intellectual pursuit places value on formal education, specifically higher education, or at least that is a notation that is invoked.

De Simone (2001) addresses the influences of economics on the democratization of education and the embodiment of corporate influences on education. De Simone (2001) supports Hofstadter's (1963) perspective on anti-intellectualism, specifically, the democratization of intellect, and points out Hofstadter's relevance 40 years later. De Simone (2001) believes democratization of education needs further investigation while building upon Hofstadter's (1963) analysis from a modern perspective.

Both scholars suggest that the value and reliability of the practical uses of education, or even common sense, over the analytical abstraction is preferred to the anti-intellectual (Cross, 1990; De Simone, 2001). Cross (1990), along with De Simone (2001), believes this anti-intellectualism influences the educational systems through curriculum changes, academic freedom, functional structures, revenue, and inclusivity. However, De Simone (2001) suggests that the corporatization of America is part of the problem.

Empirical Literature

From Hofstadter's 1963 work, little to no empirical studies were performed. This drought ended in 2001 with Eigenberger and Sealander's anti-intellectual study. Before Eigenberger and Sealander's (2001) research, no instrumentation existed to measure anti-intellectualism. Several instruments have been created and used to explore the nature of intellectualism and its character, but not anti-intellectualism (Eigenberger & Sealander, 2001). Additionally, those tools used to measure intellectualism tend to be impractical, have limited access, and use multi-dimensional approaches (Eigenberger & Sealander, 2001).

Eigenberger and Sealander (2001) created a unidimensional research instrument, based on Hofstadter's analysis of anti-intellectualism. The instrument directly measures anti-intellectualism in academic learners and is entitled the student anti-intellectualism scale (SAIS). Eigenberger and Sealander's (2001) tool quantifies the degree of anti-intellectualism, and their research focused on university students' attitudes and beliefs towards academic pursuits, academic facilitators, and academia, in the general sense. Eigenberger and Sealander (2001) a series of subsamples of university students from

different universities along with other measurement tools used to determine the SAIS's validity.

Eigenberger and Sealander's (2001) research resulted in positive correlations between high degrees of student anti-intellectualism with high degrees of right-wing authoritarianism and dogmatism, commonly associated with "cognitive rigidity" (p. 393). These results also correlated with Hofstadter's (1963) subtypes of anti-intellectualism, anti-rationalism, anti-elitism, and the spread of anti-intellectualism through the democratization of knowledge. Per Hofstadter (1963), anti-intellectualism first got its strong grip on our ways of thinking because it was fostered by an evangelical religion that also purveyed many humane and democratic sentiments. Anti-intellectualism made its way into our politics because it became associated with our passion for equality (Hofstadter, 1963). Anti-intellectualism became formidable in our education partly because our educational beliefs are evangelically egalitarian (Hofstadter, 1963).

Further, Eigenberger and Sealander (2001) found a relationship between anti-intellectual scores and critical thinking, determined by the California critical thinking skills test (Eigenberger & Sealander, 2001). These scholars concluded that students with high levels of anti-intellectualism would reject and devalue intellectual pursuits, as well as be less likely to participate in critical thinking activities (Eigenberger & Sealander, 2001). The data, again, supported Hofstadter's (1963) construct of anti-intellectualism. Though Hofstadter (1963) looks to the rise of the businessman and the flood of capitalistic ideals as the driving force behind a culture of practicality, Eigenberger and Sealander's (2001) results still correlate with the ethos that efficiency and practicality will provide more immediate payoff over intellectual pursuits. Additionally, Eigenberger

and Sealander's (2001) study results suggest "the existence of attitude structure resembling what has traditionally been thought of as anti-intellectualism" (p. 397). Furthermore, the SAIS found a correlation, with possible causation of high degrees of anti-intellectualism with low levels of openness to intellectual experiences (Eigenberger & Sealander, 2001). However, Eigenberger and Sealander (2001) did not find a significant correlation between anti-intellectualism and social approval and conformity.

Despite the positive results in Eigenberger and Sealander's (2001) work, the research has some disputed disparities. The wording of the SAIS tends to be more pessimistic, hostile, and contrary to social normal opinions, which generated concerns that participant responses were susceptible to "a socially desirable response" (Eigenberger & Sealander, 2001, p. 395; Marques et al., 2010). However, the negative language in the SAIS leads to a later modification of the scale, which will be discussed further in this section (Eigenberger & Sealander, 2001; Marques et al., 2010).

Eigenberger and Sealander's (2001) work has been criticized for their association of anti-intellectualism with trait theory. Eigenberger and Sealander's (2001) identified anti-intellectualism as a subset of a personality trait that is associated with (a lack of) openness for experiences, and because anti-intellectualism is seen as a personality construct regarding openness or intellect, it falls within the realm of the five-factor model of personality (Eisenberg & Sealander, 2001). Based on the psychological theory of the five-factor model of personality, the authors of the SIAS go on to compare the personality trait of anti-intellectualism with anxiety traits, stating that both traits can be modified over time; the latter with therapy and the former with pedagogical intervention to increase "critical thinking and motivate learning" (Eigenberger & Sealander, 2001, p.

398). The SIAS authors do not believe anti-intellectualism is a concept of learning but is heavily rooted in an individual's personality that has environmental influences (Eigenberger & Sealander, 2001). Howley (2002) argues against Eigenberger and Sealander's (2001) ideas that anti-intellectualism is a trait. Howley (2002) states that anti-intellectualism is derived from cultural influences and that Eigenberger and Sealander (2001) do not have a rigorous proof for anti-intellectualism personality traits. Further, Howley (2002) points to the rejection of an anti-intellectual trait among psychological and sociological scholars, which includes Hofstadter (Howley, 2002). According to Hofstadter (1963), the premise of anti-intellectualism is the social components that affect knowledge, which makes up one's cultural influences.

Despite the criticism of Eigenberger and Sealander's (2001) work, their anti-intellectualism tool, the SAIS, has been proven valid and reliable in the measurement of anti-intellectual tendencies among students in higher education. Other researchers have used the SAIS to explore anti-intellectualism among general academics, business, education science, history, sociology, and psychology (Eigenberger & Sealander, 2001; Laverghetta et al., 2007; Laverghetta, 2015; Laverghetta & Nash, 2010; Marques et al., 2017). Many scholars continue to find correlational data linking student anti-intellectualism to Hofstadter's (1963) analysis.

Laverghetta used Eigenberger and Sealander's (2001) SAIS tool in multiple correlational studies (Laverghetta et al., 2007; Laverghetta, 2015; Laverghetta & Nash, 2010). Laverghetta et al., (2007) found quantitative data supporting Hofstader's (1963) analysis of political and religious social influences on anti-intellectualism. Laverghetta et al. (2007) researched student political conservatism, which included religious and

economic factors, to anti-intellectualism scores. Laverghetta et al. (2007) found a strong correlation between anti-intellectualism with political and economic conservatism. Additionally, Laverghetta et al., (2007) collected general demographics which included gender, college classification, political ideology, party affiliation, and race (Laverghetta et al., 2007). They also found that freshman students had higher levels of anti-intellectualism than graduate students and suggested a link between higher levels of education to lower anti-intellectual tendencies (Laverghetta et al., 2007). Laverghetta et al. (2007) work suggested that a higher degree of tertiary education can combat student anti-intellectualism.

Further, Laverghetta and Nash (2010) use the SAIS tool to compare anti-intellectualism levels with college majors. Laverghetta and Nash (2010) found students with more "practically oriented majors" were found to have high anti-intellectual scores, meaning more indicators for anti-intellectualism. Laverghetta and Nash's (2010) study will be the first empirical link between anti-intellectualism to nursing; this link to nursing anti-intellectualism will be discussed further in the review.

Marques et al. (2017) created a new trajectory for quantitative anti-intellectual research. Marques et al (2017) set out to develop a brief, self-reporting tool to measure intellectualistic tendencies. Marques et al., (2017) devised their new scale with roots from Eigenberger and Sealander's (2001) scale, the SAIS.

Marques et al., (2017) shortened the SAIS, modified its language and focus, and changed the intended population. The new scale is called the intellectualism-anti-intellectual scale (IAIS). Instead of solely focusing on anti-intellectualism, the IAIS tool allows for the measurement of both intellectual and anti-intellectual dispositions on a

linear continuum with anti-intellectualism and intellectualism on opposing ends (Marques et al., 2017). The IAIS uses positive language and experiences when describing aspects of intellectualism and anti-intellectualism, instead of negative language and perspectives associated with anti-intellectualism, like the SAIS (Marques et al., 2017). Additionally, the tool's targeted population was expanded to measure anti-intellectualism among the general population. The IAIS was tested with other relevant tools to measure anti-intellectualism, including the SAIS, to determine the scale's validity and reliability (Marques et al., 2017). More details about the IAIS tool are discussed in Chapter III.

The IAIS scale was used to measure the Australian general population (Marques et al., 2017). However, the sample used in Marques et al.'s (2017) work was primarily university students, which they identify as a limitation in their work. Moreover, the study did have several large samples. The samples included the following: one community sample, five undergraduate, higher educational students' samples, and one convenient sample (Marques et al., 2017). The study did find significant demographic factors associated with anti-intellectualism (Marques et al., 2017). As applied, the IAIS tool indicates that older individuals had lower levels of anti-intellectualism when compared to younger individuals (Marques et al., 2017). When comparing individuals with and without formal higher education, individuals with tertiary education had higher degrees of intellectualism, and those without had higher degrees of anti-intellectualism (Marques et al., 2017). Marques et al. (2017) did not find any correlation factors between anti-intellectualism, intellectualism, and gender.

Nursing Literature

The term anti-intellectualism is not often found within nursing research; however, the concept is addressed in the literature. Some literature discussed in this section specifically addresses anti-intellectualism within the nursing profession (Clark & Thompson, 2019; Miers, 2002; Racine & Vandenberg, 2021; Thompson & Watson, 2001; Walker, 1997), whereas other work discusses the concepts of anti-intellectualism without direct use of the term (Chapman, 1997; Holmes et al., 2006; McCrae, 2012; Murray et al, 2007; Risjord, 2010; Thompson & Darbyshire, 2012; Watkins, 2018; Webb, 2002). Despite anti-intellectualism being known as intrinsically American, the nursing research that addresses anti-intellectualism is typically non-American, which can be viewed as a reinforcement of American anti-intellectual culture.

The common trend of nursing anti-intellectual research focuses on the duality of the profession with one vein supplying the practical application of nursing in the workforce and the other focusing on scholastic pursuits. The nursing literature suggests different causes and meanings for this duality, but all the scholars agree that it is a negative part of the profession (Chapman, 1997; Racine & Vandenberg, 2021; Thompson & Darbyshire, 2013; Thompson & Watson, 2001; Walker, 1997; Watkins, 2018). The literature often suggests that this split translates from nursing's historical background, and its transgression into the nursing practice-theory gap (Chapman, 1997; Miers, 2002; Racine & Vandenberg, 2021; Risjord, 2010; Watkins, 2018; Webb, 2002). Some nursing scholars believe this division in nursing is due to a power struggle, rooted in snobbery, between nursing scholars and researchers, and those who practice in the clinical setting (Chapman, 1997; Racine & Vandenberg, 2021; Thompson & Watson, 2001; Thompson

& Watson, 2006; Webb, 2002). While other scholars look primarily to the practical history of nursing, nursing education, and nursing research (Clark & Thompson, 2019; Holmes et al., 2006; McCrae, 2012; Murray et al., 2007; Walker, 1997). Predominantly, the review of nursing literature generated common themes that explicitly align with Hofstadter's (1963) anti-intellectualism, with one theme linked on a more abstract level. These themes are used in the organization of this section of the literature review.

A point needs to be made that many of the nursing scholars addressed below, point to anti-intellectualism as a problem with the individual nurse. These scholars believed that this vein of nursing-based anti-intellectualism pertains to the traits that individual nurses possess. Anti-intellectualism, as a trait, was as discussed, previously, as a criticism of Eigenberger and Sealander's (2001) work. Trait-based conceptions of anti-intellectualism do not neatly dovetail with Hofstadter's work, which broadly conceptualized anti-intellectualism as the result of systemic, sociological factors

The nursing literature is categorized into five sections. Those sections are anti-elitism, practicality, anti-rationalism, democratization of intellect, and quantitative data. The first four subsections correlated with Hofstadter's analysis of anti-intellectualism, specifically the extrinsic factors that influence anti-intellectualism, and the last subsection discusses quantitative data regarding nursing anti-intellectualism.

Anti-Elitism

Thompson and Watson's (2001, 2006) editorials refer to an anti-intellectual ethos that perfuses throughout the nursing profession. Thompson and Watson (2001, 2006) specifically point to the manifestation of anti-intellectualism as anti-elitism. Racine and Vandenberg (2021) also refer to anti-elitism, as a form of anti-intellectualism, through the

duality of nursing practice. The duality of nursing arises from the "opposing priority between bedside and elite nurse" (Racine & Vandenberg, 2021, p. 2). Based on the scholarly works discussed in this section, factors that influence anti-intellectualism, via anti-elitism, is a nurse's work environment.

Webb (2002) does not use the term anti-intellectualism, specifically, but describes its elitist characteristics and origins within the nursing profession. The nursing stereotypes of the bedside versus elite nurses are grounded in an us-versus-them mentality (Webb, 2002). Practicing nurses see themselves as hard-working, but they lack regard for the academic standards needed to produce qualified nurses (Webb, 2002). Nursing scholars and researchers are described as out-of-touch, skillless, and removed (Webb, 2002). As with most academics and scholars, nursing academics are also seen in their ivory towers and are not taken seriously by the working nurse (Chapman, 1997; Thompson & Watson, 2006; Webb, 2002). Thompson and Watson (2006) believe that the 'ivory tower' stereotype is further fueled because nursing academia and professors are less focused on contributing to the nursing scholarship and advancement of the nursing field, but on their own prodigious betterment (Thompson & Watson, 2006). Thompson and Darbyshire (2013) address a similar issue, stating that the nursing elite has created their own form of academic tyranny that does not allow for constructive criticism, and disregards the traditional "ethos of debate" in scholastic culture (p. 1).

Further, Webb (2002) addresses a link between the battle of the bedside and the elite nurse to the nursing practice-theory gap with the elite nurse representing nursing theory and the bedside nurse representing nursing practice. The practice-theory gap, or theory-research-practice gap, occurs when integrated knowledge about nursing practice

obtained in the academic setting is not consistent with 'real-world' clinical practice (Watkins, 2018). Nursing's standards of care are founded on the traditions of the clinical setting. These dueling priorities manifest themselves in the nursing-practice gap in two ways (Racine & Vandenberg, 2021; Risjord, 2010). One way is that nursing knowledge development is good, but it is not well implemented into nursing practice; secondly, "nursing's theoretical knowledge is not useful to guide practice" at all (Racine & Vandenberg, 2021, p. 2).

To bridge the gap between theory and practice and to resolve the notion that nursing academics are out of practice, the scholarly vein of nursing has heightened focus on research and teaching directly to practice (Chapman, 1997; Racine & Vandenberg, 2021). Racine and Vandenberg (2021) go on to say that "equating skills necessary for practice with theoretical ignorance is problematic as it indirectly supports anti-intellectualism" (p. 3). Racine and Vandenberg (2021) also link nursing anti-elitism to Hofstadter's (1963) practicality, or reflective instrumentation, though not directly addressing Hofstadter. Racine and Vandenberg (2021) believe a cause-and-effect relationship exists between the two forms of anti-intellectualism, and this relationship is perpetuated by the nursing education system. How nursing education plays a role in nursing anti-intellectualism, and its link to Hofstadter, will be discussed further in the section.

Practicality

Anti-intellectualism, from a practical approach, is often discussed in the literature. The fact remains that nursing is a practical profession and, historically, used practical approaches to training, and these facts are antiquated knowledge (Clark & Thompson,

2019; Holmes et al., 2006; McCrae, 2011; Racine & Vandenberg, 2021; Thompson & Watson, 2006; Walker, 1997; Watkins, 2018). The literature discussed in this subsection emphasizes alternative rationales for nursing practical anti-intellectualism, or Rigney's (1991) term, reflective instrumentation.

Walker (1997) describes nursing anti-intellectualism as being anti-theoretical, with a view of theory as synthetic semantics. Like other scholars, Walker (1997) describes nursing anti-intellectualism as the catalyst force behind the theory-practice gap and believes that the theory-practice gap further perpetuates nursing anti-intellectualism. However, Walker (1997) is of the opinion that the practical history and conditioning of the nurse have led to the practice-theory gap, and therefore, anti-intellectualism. In accordance with Walker (1997), nursing anti-intellectualism is in the form of the pragmatic and practical approach to performing nursing duties. Walker (1997) states that pragmatism and practicality are influenced by nursing's educational and training history of apprenticeship, the 'politics of gender', and the social contrast that women are task doers versus abstract thinkers (p. 5). Walker (1997) argues two points for anti-intellectualism, both of which fall under Hofstadter's (1963) description of anti-intellectualism practical culture; like Hofstadter (1963), Walker (1997) looks to social systems to explain anti-intellectualism.

The first point Walker (1997) makes specifically addresses the sociological influence of gender on knowledge development. Walker (1997) states that women dominate the nursing profession, and, as predominantly women, nurses value tasks because women are good at tasks. In turn, nurses have created their own gate against intellectual pursuit because they believe it is not good or beneficial, since it lacks hands-

on work (Walker, 1997). These ideas are further perpetuated, according to Walker (1997), because thinking is considered patriarchal, and is often validated by the number of men who dominate academia and other highly influential social systems. Additionally, Walker (1997) explains that nurses will remain docile because they are women, and women are dominated by the social pressures of being nice. In the nurse's eyes, niceness is considered the self-sacrificing part of caring, and caring is part of the nurse's identity (Walker, 1997). "A caring nurse, who is always nice to people is not likely to be an agent of conflict and change" therefore, they become incarcerated by their own ideals (Walker, 1997, p. 8). Additionally, they value the ideals of a team, due to the caring and committed nature of the female nurse (Walker, 1997). A team of submissive doers that values practical skills will remain in the cult of knowledge that accepts domination by patients and doctors (Walker, 1997). Ergo, these ideas create a self-perpetuating power of anti-intellectualism.

Another point Walker (1997) makes about practical anti-intellectualism is nursing's historical apprenticeship approach to education. The idea of the apprenticeship has influenced nursing's task-oriented ways of learning how to 'nurse' on the job (Walker, 1997). Learning on the job has conditioned nurses to rely on common-sense decision-making, or rational, experienced truths (Walker, 1997). Traditionally, nurses were not provided with the skills, let alone the language to express experiences and practices in the theoretical realm (Walker, 1997). In the past, nurses looked to physicians for their rationales and theoretical explanations (Walker, 1997). The utilization of the physician curbed the need for the nurses to inquire further and kept nurses to their task-oriented skillset (Walker, 1997). Clark and Thompson (2019) also address nursing anti-

intellectualism as it derives from not knowing. Clark and Thompson's (2019) call to action refers to nursing anti-intellectualism as toxic and explains that nursing anti-intellectualism refers to research and its irrelevance because they reject what they do not understand. Nurses are educated on science but do not feel confident in their understanding of scientific inquiry (Clark & Thompson, 2019). Therefore, nurses, again, stay in their comfort zones of task-based practice.

McCrae (2011) also discussed nurses' propensity to value practical application over theoretical development. McCrae (2011) does not use the term anti-intellectualism in literature but describes the general quintessence of the practical flavor of anti-intellectualism. McCrae (2011) describes some key points as to why the nursing profession sides more with practicality than theory. Like other scholars, McCrae (2011) looks to the nursing practical background but also suggests that nursing theoretical development is stunted because the "meaning of nursing remains elusive" (p. 224). Nursing's theoretical development tends to be conceptual models, which are not highly theoretical (McCrae, 2011). The abundance of theoretical models in the nursing scholarly repertoire has led to an extreme level of abstraction, complexity, or simply filled with metaphysical semantics that the average nurse cannot make sense of, let alone apply to practice (McCrae, 2011). Thompson & Watson (2001) also provide evidentiary support that aligns more with the practical pragmatism of anti-intellectualism. These scholars state that nursing research, in the name of scholarship, is not a priority due to funding issues, and the push for skills and competency-based research (Thompson & Watson, 2001). Regardless of the number of concept models nursing has contributed to the field,

nursing knowledge development still highly emphasizes hard scientific data, which is addressed in more detail later in this section (Holmes et al., 2006; McCrae, 2011).

Anti-Rationalism

The closest tie nursing has to the religious influences of anti-intellectualism is the loose link of morality, specifically, the moral underpinning applied to the nursing theories of care and nursing ethics. Nursing history is rich with religious influences and affiliations, and, according to Fowler (2009), the Christian perspective currently intersects with nursing practice and education. However, the anti-intellectualism derived from evangelicalism, as discussed in Hofstadter's (1963) analysis, is not in nursing literature. Yet, one abstract link to anti-rationalism is evidenced-based nursing.

Evidence-based nursing is the use of scientific research to determine practice (Holmes et al., 2006). According to Walker (1997), nurses did not support evidence-based nursing practice. Walker (1997) suggests that nurses do not like the sterility of scientific inquiry believing it is "cool [and] detached," devoid of passion and moral sense for providing nursing care (p. 8). The notions of cold, neutral analytical reasoning, associated with intellectual inquiry, correlate with Hofstadter's (1963) anti-intellectual analysis regarding religion. Where the evangelical following regard the academic perspective on worship as flat and unfeeling, nursing sees the scientific inquiry through the same lens (Walker, 1997). These ideas could speak to the timeframe in which Walker's (1997) work was published, for it contradicts other scholars' opinions regarding evidence-based nursing (discussed below).

Inversely, Holmes et al., (2006) state that the nursing professions are devoted to evidence-based research, which is considered the best and only approach to creating new

nursing knowledge (Holmes et al., 2006). Holmes et al., (2006) critique modern nursing's dogmatic research mentality, stating that nursing research lacks diversity. Essentially, nursing uses and accepts, without criticism, one type of research method and subjectivity, the scientific inquiry of nursing clinical practice (Holmes et al., 2006). Nursing's golden standard for research and knowledge development is dangerous and does not vary out of fear of illegitimacy and criticism (Holmes et al., 2006). Holmes et al. (2006) ideas of dogma in nursing do not express themselves in the traditional Hofstadter manner. However, nursing's approach to knowledge development correlates to the operative of the evangelical anti-rational system and the support for 'absolutism' based on fear. The evangelists reject the non-theological and the nursing profession rejects the non-empirical. These notions of fear also apply to nursing's propensity to embrace the practical, which is empiricism in design. However, one rejects the rational, when one rejects the non-empirical; some things cannot be proven by evidence but by reason. Concepts for nursing care and compassion are philosophical, and their understanding relies on reason, not empirical science (McCrae, 2012).

Democratization of Intellect

The other factor that influences anti-intellectualism is the democratization of intellect. The democratization of intellect is found in formal education and is the vector that spreads anti-intellectualism. Nursing anti-intellectualism is also influenced by the democratization of intellect through formalized nursing education, and the literature supports this notion. However, before addressing the literature, the reader must understand the constructors of formal nursing education. The section will begin with a

general explanation of nursing degrees, followed by the components of anti-intellectualism within nursing education.

Nursing degrees and licensure. Nursing is a practical profession, with a specific skill set, often taught within an academic or vocational sphere. Nursing education and licensure levels can vary. However, formal nursing education aims to produce entry-level professional nurse generalists who must pass a standardized licensure examination to practice. Specialty training is often completed on the job, but all nursing programs expose students to different types of practice experiences.

The three distinct types of licensed nurses: are the practical nurse, the registered nurse, and the advanced practice nurse. The practical nurse is different from the nurse practitioner and is often referred to as a PN (practical nurse). The registered nurse is also called an RN. Advanced practice registered nurses (APRNs) include nurse practitioners, certified registered nurse anesthetists, clinical nurse specialists, and certified nurse-midwives. APRNs first become an RN, then obtain a graduate nursing degree. All nursing types must pass a licensure exam to become practicing nurses entering the workforce under their educational title. PNs received their education through vocational or community colleges. The PN completes a training program, which is roughly between one to two years, to become eligible to take the National Council Licensure Examination (NCLEX-PN). To become an RN, there are three points of entry for becoming eligible for the national licensure exam (NCLEX-RN): an approved diploma program, an associate degree in nursing (ADN), and a Bachelor of Science in Nursing (BSN). ADN and BSN programs are found at the university or college level, whereas diploma programs are often affiliated with hospitals. The trend and push in the profession are to have

baccalaureate degrees, and according to the NCSBN (2021a), over 50% of nurses have BSNs. APRNs complete a graduate-level degree, after obtaining an RN licensure, to become eligible to complete a state licensure exam for nursing practice, if required by the state's nursing board. APRN degrees are currently transitioning from a master's level to doctoral level education.

In addition to the degrees that make candidates entry-level professionals, nursing has varying master's and doctoral level degrees, including those for APRNs. Nurse practitioner degrees are practice and clinical-based, and others are academic and research-based (e.g., the Ph.D.). Essentially, the nursing educational system can be condensed into two pathways—the practical and the scholarly.

The two educational pathways tend to leave the theoretical pursuit to the nursing scholars, while the rest of the field remains focused on practical skill sets. Most of the highest degree levels in nursing are doctorate-prepared nurse practitioners (NCSBN, 2020, 2021a). In nursing, financial incentives are available to pursue academic education over practical education. However, at graduate and postgraduate levels, those who participate in the practical pursuits, over theoretical, are rewarded financially, leaving scholars in the vast minority.

Nursing Education. In theory, formal education intends to facilitate intellectual development, and therefore, eliminate anti-intellectualism. Yet, most anti-intellectuals have some education, and a "degree of competency", and "the leading anti-intellectuals are...deeply engaged with ideas, often obsessively engaged with this or that outworn or rejected idea" (Hofstadter, 1963, pp. 21-22). The development and influencing trends of nursing education play into Hofstadter's (1963) identified transmitter for anti-

intellectualism—the democratization of intellect. Each expression of anti-intellectualism influences the spread of nursing anti-intellectualism because formalized nursing is included in academia. Based on these notions, the more people who received formalized nursing education, the more diffuse nursing anti-intellectualism can become. However, the nursing profession has gained traction in improving its "occupational status through better education" and credentialing, which is where the influence of elitism, practicality, and anti-rationality begins (McPherson, 2012; Racine & Vandenberg, 2021).

The most current and informative analysis of nursing anti-intellectualism is *A philosophical analysis of anti-intellectualism in nursing: Newman's view of a university education* by Louise Racine and Helen Vandenberg (2021). As Racine and Vandenberg's (2021) philosophical analysis focuses on nursing academics' contribution to nursing anti-intellectualism, the work also addresses both anti-elitism and the practical components of anti-intellectualism in nursing education. Racine and Vandenberg (2021) suggest that the rejection of nursing's history, for academic inclusion, is a part of the link to nursing elitism, and nursing anti-intellectualism. Nursing, as a profession, is preoccupied with the need for professional legitimacy, progressive, scholarly recognition, and desire for academic inclusivity, and these preoccupied impulses come from the need to combat the traditionally feminized "skills and past practice[s] [that] represent an anti-intellectual discourse in nursing" (Nelson & Gordon, 2004; Racine & Vandenberg, 2021, p. 2). Nurses no longer want to be synonymous with the idea that they are senseless doctor's helpers and believe that their education makes them more valuable (Miers, 2002; Nelson & Gordon, 2004; Racine & Vandenberg, 2021).

Miers's (2002) work provides more insight into nursing's academic history and its associations with anti-intellectualism. Miers (2002) addresses nursing anti-intellectualism, as a cultural phenomenon derived from (a) the inclusion of vocational training and former apprenticeships into academia and (b) the expansion of educational opportunities for women. According to Miers (2002), nursing anti-intellectualism is seen as a negative reaction, or defensive reaction, of placing critical and abstract thinking above practical activity or skill. Miers (2002) also supports Hofstadter's (1963) concepts of anti-intellectualism, the practical approach outranking the theoretical for capital gain, and anti-elitism. At the time, academically trained nurses were thought to have a false sense of self regarding their education, and were perceived as privileged, and persnickety (Miers, 2002). Additionally, the vocationally trained nurses believe formalized, academic nursing education is unnecessary since it does not change the outcomes of workforce-related rewards, which is an attitude that is still common today (Miers, 2002). Miers (2002) addresses these two cultural influences as a means for creating an oppressed group of academically trained nurses as the beginning of nursing educational duality. Since the academically trained nurses were seen as a paradox, these nurses accepted their anti-intellectually derived fate, which limited the expansion of their intellect (Miers, 2002).

Another aspect of nursing's unusual foothold in academia is its history of vocational training using the apprenticeship model (Thompson & Watson, 2006). The apprenticeship model was the traditional means of nursing education. However, the apprenticeship model is beginning to be reintegrated into modern nursing education with the use of preceptorships and calling into question nursing education's legitimacy within the field of academia (Holmes et al., 2008; Racine & Vandenberg, 2021). The

apprenticeship model is often seen as “non-scientific in university circles” and perpetuates nursing’s image as a subpar academic discipline (Holmes et al., 2008; Racine & Vandenberg, 2021). Losing academic respect creates a vicious cycle of anti-intellectual resistance (Holmes et al., 2008; Racine & Vandenberg, 2021). Nursing scholars are further divided by the drive to push for validity, which leads to two camps of thought—the negative effects of academic elitism discussed above, or acceptance of a practical fate, creating more polarized components of the nursing profession (Holmes et al., 2008; Racine & Vandenberg, 2021; Rolfe, 2019; Webb, 2002).

The acceptance of nursing practical fate within academics is a common trend found in formal nursing education (Racine & Vandenberg, 2021; Rolfe, 2019; Webb, 2002). The increasing uses of nursing education’s practical approaches to teaching perpetuate anti-intellectualism (Racine & Vandenberg, 2021). Despite being modernized, nursing education still supports “doing over thinking,” and these dominating ideas “undervalue abstract thinking and undermine the acquisition of theoretical knowledge to guide practice” (Racine & Vandenberg, 2021, pp. 5, 7). These ideals lead to anti-intellectualism in nursing education. Additionally, the practical and anti-rational approach to nursing education is supported by heavily competency-based curricula and nursing’s faithful devotion to evidence-based nursing (Holmes et al., 2006; Racine & Vandenberg, 2021). Further, the use of a competency-based curriculum is influenced by the economic market. Nursing schools are pressured to meet the workforce’s demands for nurses, in quantity and standardized quality through “mass education” (Racine & Vandenberg, 2021, p. 8). In a focus on resolving economic problems, nursing education has “expunged nursing theory for the context of nursing education” to make room for

teaching job-ready skills sets (Racine & Vandenberg, 2021, p. 8). Letting the labor market dictate nursing education creates a culture of acceptance, which leads to partially educated individuals (Racine & Vandenberg, 2021). To move away from their ivory towers and the pressure of workforce-ready culture, nursing educators utilize hands-on knowledge development to prepare students for the labor force (Racine & Vandenberg, 2021). Nursing instructors bring these practical ideas into the classrooms, where traditionally, theoretical knowledge and reasoning are developed. Educators focus on teaching memory over critical analysis (Racine & Vandenberg, 2021). Nursing education's focus on practical skills lowers achievement outcomes and neglects critical thinking; these "lower standard of excellence and depreciation of intellectual work characterizes anti-intellectualism in nursing" (Racine & Vandenberg, 2021, p. 8). In addition, Racine and Vandenberg (2021), believe the corporatization of university education, along with nursing education's practical trends, leads to anti-intellectualism and the jeopardizing of nursing academia.

Racine and Vandenberg (2021) state that a major influence on nursing education and the influence of anti-intellectualism is the changing nature of higher education, specifically universities' alignment with corporate goals and mindsets. University funding, as well as department allocation, is tied to achievement indicators like enrollment rates, failure rates, pass rates, and student satisfaction, which does not translate to academic excellence (Racine & Vandenberg, 2021; Rolfe, 2019). Higher education is no stranger to budget cuts, leading to the limitation in resources as well as facility members, which influences the ability to provide quality education (Racine & Vandenberg, 2021; Rolfe, 2019). Additionally, universities are economically influenced

to meet the demands of the job market and the student's willingness to pay for academic education (Racine & Vandenberg, 2021; Rolfe, 2019). Universities have pushed for virtual education and the use of web-based tools, which tend to be practical in nature, to meet the student's demands as well as maximize cohort sizes (Racine & Vandenberg, 2021; Rolfe, 2019).

According to Hall (2009), the use of technology can and has reduced academic engagement among students and faculty and has led to the non-confronted spread of anti-intellectualism. Hall (2009) believes that the use of a technological approach to nursing education, and academic education in general, as a cure-all causes more side effects. Faculty rely on technology to deliver the same quality of academic instruction to meet the challenges of high workload, issues with student clinical placement, and multiple student accommodations (Hall, 2009). However, excessive use of technology creates gaps in communication, boundaries, expectations, engagement, and missed learning opportunities (Hall, 2009).

Additionally, universities' missions focus more on solving economic problems over the production of intellectual society. The move to vocational missions and values spills into the academic culture and influences the motives of each academic educational system, including nursing. These university issues degrade academic culture and intellectual influences, as well as nursing education's ability to combat anti-intellectualism (Racine & Vandenberg, 2021; Rolfe, 2019). Where academics once served as a resource for nurturing nursing education's intellectual side, now it is to become a proponent of anti-intellectualism and has pushed nursing schools to become focused on manufacturing nurses (Racine & Vandenberg, 2021).

The practical history of the nursing profession, plus its modernization within academics and science, continues to contribute to nursing anti-intellectualism and its peculiarity (Chapman, 1997). Evidence in the literature supports theoretical links to anti-intellectualism in nursing education, and therefore among nursing students. In addition to nursing education's theoretical influences, the closest quantitative research link nursing has to anti-intellectualism, is in nursing academics. Evidence in the literature reports findings of anti-intellectualism among nursing students. The same student anti-intellectualism scale (SAIS), created by Eigenberger and Sealander (2001), discussed in previous sections found high levels of anti-intellectualism among nursing students.

Quantitative Data Regarding Nursing Anti-Intellectualism

The SAIS was applied in a study by Laverghette and Nash (2010). The study looked for correlations between student anti-intellectualism scores and college majors (Laverghetta & Nash, 2010). Laverghetta and Nash (2010) found that students with more 'practically oriented majors' were found to have high anti-intellectual scores meaning more indicators for anti-intellectualism. Nursing majors were included in the practical major group with high anti-intellectual scoring. The data from the Laverghetta and Nash (2010) study indicates a likelihood that nurses are anti-intellectual. The study states its results were "consistent with Rigney's (1991) assentation that educational institutions could be perpetuating the attitude of anti-intellectualism," yet gaps remain in the literature regarding the outcomes of nursing education on anti-intellectualism (Laverghetta & Nash, 2010, p. 4).

Summary

Due to the identified gap in the literature, a question arises as to the extent to which anti-intellectualism pervades the nursing profession. Accordingly, this research determined if practicing nurses, who have completed their initial nursing education, have associations with anti-intellectualism. The literature provides context for intrinsic factors that possibly correlate with nursing anti-intellectualism.

One such factor is education. The literature states that individuals with higher educational levels are, generally, less likely to have anti-intellectual tendencies (Laverghetta, 2015; Laverghetta & Nash, 2010). However, nursing education is decidedly pragmatic and instrumentalist in nature, suggesting risks for a higher rate of anti-intellectualism compared to more abstract fields of study. The literature suggests that the education system, itself, is a vector for such occupation centered field. A nurse's highest educational level and degree type are possible factors that correlate with higher levels of anti-intellectualism, especially when comparing vocational training to academic training.

Beyond education, another possible intrinsic factor for anti-intellectualism is gender and age. Some scholars address the culture of gender and its domination in the profession as a factor for nursing anti-intellectualism. Walker's (1997) opinion specifically addresses how ideas of traditional feminized conditions nurses to value hands-on, task-like work over the intellectual pursuit. Walker (1997) believes that society's influences on gender roles lead nurses to stand on the practical side of the theory-practice gap. However, other quantitative literature did not identify gender as an effect on intellect or anti-intellectualism (Marques et al., 2017). Yet, Marques et al.

(2017) did identify age as a proponent of anti-intellectualism, stating that younger individuals are more likely to experience anti-intellectualism.

As stated, the literature does not address specific intrinsic factors common among nurses, outside of the ones addressed above. The lack of evidence in the literature review provides an opportunity to find insight into the commonality, depth, and relationships of anti-intellectualism within the nursing profession. The literature review has provided the pathway to narrowing the research gap on anti-intellectualism in the nursing profession.

CHAPTER III - METHODOLOGY

Introduction

A gap in research has been identified regarding the existence of anti-intellectualism within the nursing profession, and the relationship between anti-intellectualism and the intrinsic factors that nurses share. The purpose of this research aimed to determine and describe the effects of intrinsic factors and the degree of a potential cause of anti-intellectualism, through quantitative means. The focus of the research was (a) to describe the degree of nursing anti-intellectualism; (b) to determine correlating factors, not causation, regarding nursing anti-intellectualism; and (c) to determine strong predictors of anti-intellectualism among nurses.

To align with this study's purpose, the design for this research is a descriptive correlational design. Chapter III describes the research design in further detail and the execution methods for this study. This chapter specifically discusses the study setting, sample, instrumentation, data collection procedure, data analysis, and ethical consideration.

Research Design

A descriptive design focuses on describing a specific population and the occurrence of a phenomenon within that population (Creswell & Creswell, 2018; Gray et al., 2017). This study contains components that align with the perimeters of a descriptive design. One component of the study is to determine the existence and depth of anti-intellectualism among practicing nurses. Additionally, this research design uses a survey method.

A descriptive, survey design is used to answer descriptive-based research questions, and research questions regarding variable relationships (Creswell & Creswell, 2018). Quantitative data was obtained from an online, self-reporting survey. The two-part survey collected data pertaining to anti-intellectualism and demographic information. A scale, entitled the intellectualism-anti-intellectual scale (IAIS), quantified the degrees of anti-intellectualism, and the demographic data determined the common intrinsic factors the nursing participants share. The research methodology helped tease out trends and correlating factors among nurses who share high levels of anti-intellectualism, according to the IAIS tool.

In addition to the descriptive element of this research, the study focused on determining correlating relationships among variables (Gray et al., 2017). The study describes factors associated with anti-intellectualism among practicing nurses and identifies statistical significance among those factors and anti-intellectualism. Lastly, the research also aimed to determine strong predictors of anti-intellectualism among nurses by looking at correlations between variables, or intrinsic factors, specific to demographic data. The focus on correlating variables and prediction falls under the parameters of predictive correlation design, which intends to establish the strength of relationships among variables with the end goal of prediction (Gray et al., 2017).

The variables studied included the practicing nurse's experiences of anti-intellectualism and demographic variables. The nurse’s experience of anti-intellectualism was measured with the IAIS. The IAIS resulted in interval data, however, this dependent variable was converted into two categorical variables – anti-intellectualism and intellectualism for the statistical analysis. The demographic data address both general

demographics and demographics associated with nursing professionals. Demographic variables are listed in Table 2.

Table 2

Demographic Variables

Variable	Data type
Age	Interval/Ordinal
Gender identity	Nominal
Ethnicity	Nominal
Marital status	Nominal
Members of household	Interval/Ordinal
Income	Ordinal
Income affected by COVID-19	Nominal
Employment status	Nominal
Employment contracts	Interval/Ordinal
Leaving workforce	Nominal
Nursing licensure	Ordinal
Nursing Degree	Ordinal
Nursing specialties	Nominal
Current enrollment in school	Nominal
Other degrees	Nominal
Health insurance	Nominal
Location/residency	Nominal
Type of community	Nominal
Community involvement	Nominal
Degree of community involvement	Ordinal
Political ideology	Nominal
Political party affiliation	Nominal
Religious affiliation	Nominal
Christian religion affiliation	Nominal
Religious level	Ordinal

Setting and Sample

Sample

The desired population for the study is practicing nurses. The study targeted current practicing nurses, who have practiced within the past two years. Subjects included practical nurses (PN/LPN/LVN), registered nurses (RN), and advanced practice

registered nurses (APRN). The data obtained from the nursing populations included varying demographic data and quantitative data regarding anti-intellectualism.

The research obtained data from a large convenient sample size through online recruitment. Online recruitment targeted social media sites (See Appendices D, G, F). Multiple social media sites were used for the research setting. The parameter of quantitative research establishes that a large sample size is needed to conclude the data set (Gray et al., 2017; Waltz et al., 2017). Utilizing a convenience sample through social media platforms allows easier and accelerated access to a large sample of the targeted population, practicing nurses, with varying sociodemographics (Fricker, 2012; King et al., 2014; Stokes et al., 2019).

Sample Size.

For this study, the sample size was estimated to be 403 subjects, calculated using G*Power version 3.1 (Faul et al., 2009; G*power Manuel, 2021; Yenipinar et al., 2019). The study used a logistic regression with a binary outcome for the x distribution in G*power. The proportion of successful outcome for the target group was Pr (Y=1| X=1) = H1 = 0.3 and the reference group was Pr (Y=1| X=1) = H0 = 0.5. The proportions calculated an odds ratio of 0.43. The calculations used a targeted power of 0.9 (1 – β), and a significance level of 0.05 (α = 0.05). R2 other X was determined by a rule of thumb for naïve estimation with a strong association = 0.81 (Williamson, n. d.). The X distribution is normal with the μ = 0 and σ = 1 (Williamson, n. d.; Yenipinar et al., 2019).

The strong association was chosen for its larger sample size calculation, and to reduce the likelihood of misjudgments; therefore, possible type 2 errors (Faul et al., 2009; Kuzma & Bohnenblust, 2004; Yenipinar et al., 2019).). According to the U.S. Bureau of

Labor Statistics (2019a, 2019b, 2019c), approximately 2,986,500 RNs, 676,400 LPN/LVNs, and 211,280 APRN are employed in the United States. Therefore, a total practicing nursing population of 3,874,180. Due to the number of American nurses, a large sample size was needed to increase the likelihood of statistically significant results. Considering the possibility of incomplete surveys, the estimated number of participants needed is 524, based on an estimated 30% result of invalid surveys.

Eligibility criteria. To be eligible for participation in this study subjects self-reported if they meet the following criteria:

- Participants are United States citizens.
- Participants understand the written English language.
- Participants have completed formalized nursing education in the United States.
- Participants have an active nursing license from the NCSBN.
- Participants have practiced under their nursing licensure within the past two years or are currently employed within the nursing profession.

Setting

Multiple social media platforms were used to recruit subjects. The social science components of anti-intellectualism and the tools that were used for data collection make the utilization of an online social outlet appropriate. An online survey regarding societal influences and demographic data would not come off as odd or unusual within the realm of virtual socialization.

Additionally, the use of multiple social media platforms allows for data collection from a large, more diverse population quickly and at a low cost (King et al., 2014). Social media is now incorporated into daily life and content exposure has become more relevant

(King et al., 2014). Social media platforms allow for inner and cross-site content sharing. Content, or information, can be shared from person to person or across multiple media sites. Some social media sites allow users to 'post' content on multiple social platforms simultaneously. Content sharing creates a participant referral system, called snowball sampling (Fricker, 2012; Stokes et al., 2019). Snowball sampling occurs when an initial respondent recruits another potential study subject (Fricker, 2012; Stokes et al., 2019). Snowball sampling was utilized with the aim that nurses and non-nurses would forward the "recruitment message to others through 'shares' and 'tags'" (See Appendices D, G, F) (Stokes et al., 2019, p. 105). The utilization of snowball sampling methods allows easier and direct access to prospective study participants who may be otherwise difficult to reach (Fricker, 2012; Stokes et al., 2019; Gray et al., 2017).

According to the Pew research center, Facebook, Instagram, YouTube, Twitter, Reddit, LinkedIn, TikTok, WhatsApp, Snapchat, and Pinterest are the top 10 fastest-growing social media platforms in the United States (Auxier & Anderson, 2021). Facebook, Instagram, LinkedIn, Twitter, and Reddit were used for this research. The selection of these platforms is based on cost, accessibility, uses, and user demographics. More specifically, each platform has a demographic-specific majority, and the combination of the data obtained from each platform creates a more wide-ranging sample collective. The rational specifics for the inclusion of each social media platform are further discussed in this section. Furthermore, to obtain sample diversity, some social media platforms were excluded. Exclusion points are (a) lower age ranges of its users, which would not meet the inclusion criteria for the sample; (b) the risk of limiting sample

diversity potential due to duplication of a specific demographic majority; and (c) feasibly of recruitment due to the nature and intension of the platform.

Facebook is the second most popular social media platform; and due to its intended uses for social networking, microblogging and popularity, the platform was chosen for subject recruitment (Auxier & Anderson, 2021; Kühne & Zindel, 2020). Facebook has a wide variety of demographics, including gender, ethnicity, age, education, and population setting; additionally, the site is visited daily by most of its users (Auxier & Anderson, 2021; Kühne & Zindel, 2020). The Facebook site allows for public broadcasting of information on user pages and networking groups, specifically to professional nursing groups, as well as recruitment through private messaging (King et al., 2014; Kühne & Zindel, 2020; Stokes et al., 2019). Roughly 70% or greater of 18- to 64-year-olds use Facebook, and greater than 70% of 30 to 64 years old share content through this platform (Auxier & Anderson, 2021). Like Facebook, Instagram is visited daily by most of its users, at roughly 73% (Auxier & Anderson, 2021). Most Instagram users range from the ages of 18 to 29 years old and are more commonly used by those who live in urban settings (Auxier & Anderson, 2021). Instagram is also more popular among minority groups—52o identify as Hispanic and 49% identify as Black (Auxier & Anderson, 2021). The utilization of Instagram as a recruitment site has the potential to obtain a younger, more ethnically diverse sample; See Appendix E for the recruitment flyer (Kühne & Zindel, 2020).

LinkedIn was used for sampling due to the user type and functionality of the platform. LinkedIn networking focuses on professional development and has users with higher educational levels (Auxier & Anderson, 2021; Stokes et al., 2019). Approximately

half of LinkedIn users have Bachelor's or graduate-level degrees (Auxier & Anderson, 2021). Samples obtained from LinkedIn are more likely to meet the inclusion criteria for this study. According to Stokes et al.'s (2019) online nursing recruitment data, LinkedIn had a higher proportion of males than females. Stokes et al. (2019) also found that the LinkedIn sample was "significantly older, higher educated, and more likely to work in the community [nursing], [nursing] administration, [nursing] research, or [nursing] education" (p. 106). Additionally, identifying and targeting practicing nurses as potential subjects is much easier on an occupational-related platform (See Appendices E & F for recruitment flyer). However, the downside to using LinkedIn is that users typically use the site monthly (Auxier & Anderson, 2021).

Twitter was used for subject recruitment because of its accessibility, and components of social networking and microblogging. Twitter is a less popular social media platform; however, in part due to its cross-culture influences, it is a beneficial source for health-related research, which includes its recruitment benefits (Arigo et al., 2018; Auxier & Anderson, 2021; Sinnenberg et al., 2017). The publicity and visibility of Twitter and its uses of hashtags—metadata tag, or label, that allows for term or content search associated with characteristics of the label—allows users to provide additional information about 'post' and created referral links (Berendt & Hanser, 2007; Berzofsky et al., 2018; Yee, 2008). Hashtags can aid in finding and recruiting subjects associated with specific terms while imparting additional information about this research project (Berendt & Hanser, 2007; Yee, 2008). The hashtags #nurselife, #nurseproud, #nursing, #nurse, #nurses #nursingresearch, #nursingresearchstudy and #nursesrock were used on Twitter, Instagram, and Facebook.

Like Twitter, Reddit is not the most popular social media platform; however, according to the Pew research center, the site's growth in popularity is one of the most statistically significant since 2019 compared to most of the other platforms (Auxier & Anderson, 2021). As a social news site and forum, Reddit has double the number of college-educated users when compared to those who have a higher school education or less. Reddit, a male-dominated site, almost doubles the number of female users, which would aid in obtaining a more gender-diverse sample group in a generally female-dominated nursing profession (Auxier & Anderson, 2021; Barthel et al., 2016). Moreover, the use of subreddits, or forum groups linked to demographics and popular interests, helped target nursing professionals under nursing-related subreddits. One concern for utilizing Reddit as a recruitment method is the influence of its culture. Reddit culture is cynical and uninterested in those who intrude on conversation within the subreddits, and users are insistent on blocking or 'trolling' intruders (Barthel et al., 2016; Ohanian, 2021). Reddit is predominately influenced by liberal perspectives (Barthel et al., 2016; Ohanian, 2021). However, the benefit of utilizing the Reddit platform to achieve the targeted population outweighs the risk. Precautions were taken when recruiting for the Reddit site; the survey used for the data collection on the site was flagged in case of respondent bias. The survey link for each site was categorized separately to also look at the trends among the social media sites.

Instrumentation and Materials

Quantitative data were collected with the intellectualism-anti-intellectual scale (IAIS) to determine the depth of anti-intellectualism independent of intelligence (Appendix A). In addition to the IAIS, demographic data were obtained from the nursing

sample using a self-response questionnaire. Varying demographic data included gender, age, ethnicity, family and personal income residential location, location of employment, levels of education, licensure, years of nursing experience, professional nursing role and experience, employment status, influences of COVID-19 on pay and work status, social background, and social influences, including political, religious, and economic perspectives and affiliations (Appendix B). The demographic questions for the questionnaire were inspired by the national survey of college graduates (NSCG) created by the United States Census Bureau, Dillman et al.'s (2014) online survey designs, and the substruction devised, by this researcher, from this dissertation's theoretical framework.

Like the demographic questionnaire, the IAIS is a self-reporting survey through which participants responded to a question set (Gray et al., 2017; Marques et al., 2017). The IAIS tool measures intellectual and anti-intellectual proclivities on a continuum; anti-intellectualism and intellectualism sit on contrasting ends of the continuum (Marques et al., 2017). The survey questions focus on a person's experience with intellectual engagement, specifically intellectual activities. The questions target emotivism by determining if intellectual participation is "either rewarding or aversive and uninteresting" (Marques et al., 2017, p. 168).

The IAIS tool was modified from the validated and statistically reliable student anti-intellectualism scale (SAIS). The measure is rigorous and well-calibrated. The modifications were made to include the general population, specifically, those with vocational interests, and refined to a 10-item scale (Marques et al., 2017). The IAIS is an ordinal measurement scale. More specifically, the IAIS uses a Likert scale to determine

the value associated with intellectual activity (Marques et al., 2017). The tool ranks objects on “a 5-point Likert scale from 1=completely false to 5=completely true” with some reverse scoring (Marques et al., 2017, p. 170). Total scores are averaged together (Marques et al., 2017). Higher scores on the IAIS indicate positive associations with intellectualism and lower scores indicate anti-intellectual tendencies (Marques et al., 2017). The following are the IAIS scale items with (R) representing a reverse score item; see Appendix A for a complete measure with Likert scoring:

- Working on difficult intellectual problems is enjoyable and stimulating for me.
- I generally find physical or recreational activities more satisfying than intellectual activities. (R)
- I tend to feel somewhat bored and impatient when dealing with remote, theoretical problems. (R)
- Intellectual discovery is ok, but I prefer other forms of excitement. (R)
- I′m probably the sort of person who would find it thrilling to be engrossed in a research project.
- I deliberately seek out sources of intellectual stimulation.
- I have more exciting things to do than sit around and think all day long. (R)
- I feel compelled to work on conceptual problems, even when I don't have to.
- One of my favorite activities is discovering alternative ways of explaining a particular phenomenon.
- The process of examining a concept in great detail is generally unappealing to me (R) (Marques et al., 2017).

Validity and Reliability

The intention of Marques et al.'s (2017) research was to create a scale for measuring anti-intellectualism. Therefore, the researcher's psychometric assessment specifically focuses on determining the tool's validity and reliability. Marques et al. (2017) used multi-sample confirmatory factor analysis (MSCFA) to examine "the degree of equivalence, or invariance, in the factor loading and correlations across samples" (p. 170). The researchers focused on demonstrating parallel findings from the sample populations by testing the IAIS along with other relevant tools to determine the scale's validity and reliability (Marques et al., 2017). Those other tools included (a) the Schwartz value survey, (b) the SAIS, (c) the cognitive flexibility scale, (d) the Marlowe-Crowne social desirability scale, (e) the right-wing authoritarian scale, (f) Raven's advanced progressive matrices (abstract reasoning), (g) need for cognition scale, (h) dogmatism scale, (i) epistemic preference indicator-revised (intellectual processing), (j) need for cognitive closure scale, and (k) personal need for structure scale (Marques et al., 2017).

Validity

Each validity measure was compared by sample type, specific demographic data—gender and age, and reliability. Six out of the 11 validity measurement tools had a Cronbach's alpha of greater than 0.83, and 5 validity measures had a Cronbach's alpha equal to 0.78. The specific degrees of validity used in Marques et al.'s (2017) research are factorial validity, convergent validity, discriminant validity, concurrent validity, and criterion validity. Many of these validity markers are subtypes often used within psychology and sociology research, which is appropriate since the concept of anti-intellectualism commonly falls within these disciplines (Marques et al., 2017).

Factorial validity is used to determine if the measure's internal structures are related to one another, and if the structure of the measure is interrelated with the theoretical components or intention (Gray et al., 2017; Waltz et al., 2017). The researchers determine factorial validity and measurement invariance by comparing the results of their tools of the student and community samples, and the IAIS results with another validated tool used to measure values (Marques et al., 2017). The results indicated a positively related, and therefore, factorial validity (Marques et al., 2017).

Convergent validity, a form of construct validity, compares whether the results of two different measures, which are intended to measure the same construct, are related (Gray et al., 2017; Waltz et al., 2017). Marques et al. (2017) tested convergent validity by measuring the IAIS and the SAIS, the mother tool, together. Similarly, concurrent validity was also established with the IAIS (Marques et al., 2017). Concurrent validity occurs when a new test, which measures a similar construct but is used differently from, an established test is found to have correlating results (Kuzma & Bohnenblust, 2004). Marques et al. (2017) found statistical significance when correlating the IAIS with other valid tools regarding cognition.

Discriminant validity determines whether unrelated factors or constructs are, indeed, unrelated, and different (Gray et al., 2017; Waltz et al., 2017). Discriminant validity was determined by ensuring that the intellection components of the IAIS scale were not related to authoritarian or societal standards (Marques et al., 2017). Criterion validity was also established with the IAIS using demographic data (Marques et al., 2017). Criterion validity compares results to a 'golden standard' or external variable (Kuzma & Bohnenblust, 2004).

Reliability

To determine the stability of the IAIS, Marques et al., (2017) demonstrated test-retest reliability by administering the instrument in a follow-up study. Test-retest reliability occurs when researchers compare the results from a tool administered twice to a sample (Gray et al., 2017; Kuzma & Bohnenblust, 2004; Waltz et al., 2017). The second administration of the study was found to be reliable, or stable, with a reliability coefficient of .88 and a probability of <0.01 (Marques et al., 2017; Kuzma & Bohnenblust, 2004).

Additionally, construct reliability was established with the one-factor model, versus a Cronbach's alpha, to determine the variance of the IAIS scale items (Marques et al., 2017). Construct reliability determines the internal consistency of the items that create a measurement scale, and a factor model analysis determines that item correlation is based on one factor (Gray et al, 2017; Kuzma & Bohnenblust, 2004; Waltz et al., 2017).

Based on the literature, the IAIS instrument has not been replicated in any obtainable, published work at this time. Though this dissertation utilized a different targeted population, the research outcomes have the potential to corroborate the IAIS's validity and reliability. The results of this study in comparison to Marques et al.'s (2017) work will be discussed in the later chapters of this dissertation.

Procedure

Subjects were recruited through multiple social media platforms addressed in the setting section of this chapter. King et al.'s (2014) social media recruitment strategies and online data collection guidelines were used, especially the components about increasing

response rates and recruiting tactics. Standardized recruitment messages and survey links were published and circulated publicly on multiple social media platforms. Recruitment messages were published to the general public with filter settings to target nurses, to pages of nursing groups, this researcher's personal social medial pages, and sent by private messaging (Arigo et al., 2018; King et al, 2014; Stokes et al., 2019). The recruitment messages contained information about the study and the criteria for participation. As recommended by Stokes et al. (2019), the initial public advertisement was followed by reminder publications at two weeks, four weeks, and six weeks. Additionally, contact information was provided to encourage communication between this researcher and participants; See Appendix H (King et al., 2014). Contact information was included in a secured email address specifically used for research purposes, not tied to any personal information or affiliations.

Recruitment messages contained both a hyperlink and a shareable link for an online survey. The online survey contained a demographics questionnaire and the IAIS. To mitigate participant bias, the online survey did not use the IAIS measure's original title and limited information was given regarding the aim of the research. Not using the original survey title and limiting awareness of the study's purpose is known as masking (Gray et al., 2017; Waltz et al., 2017). Masking prevents a participant's awareness of the researcher's intent and limits the unintended offensiveness the measure's title may cause; taking these steps limits participant bias or dissuade participation (Gray et al., 2017; Waltz et al., 2017). If participants inquire about the nature of the study, participants were told that the purpose of the research was to determine how nurses feel about academic nursing education now that they are practicing nurses.

The design of the online survey utilized Dillman et al.'s (2014) approaches to web-based questionnaire designs and online survey implementation. The online survey began with inclusion criteria, which were also in the recruitment messages. Once participants verified that they meet the inclusion criteria and consent to the survey (Appendix G), they were allowed to complete the survey. The consent form ensured their anonymity, and all collected data remained anonymous. The survey began with the IAIS measure (Appendix A), followed by the demographic questions (Appendix B). The survey was created using the electronic survey program, Qualtrics, and the raw data were stored through the Qualtrics site. The IAIS contains only self-reporting rating-style questions. The IAIS uses a five-point Likert scale, ranging from 'completely false' to 'completely true'. The demographic portion of the online survey contained dichotomous questions, multiple-choice questions, and a few open-ended questions that allowed participants to fill in their answers. The online survey was set to limit multiple survey completions.

Data Analysis

For the data analysis, precision is of the utmost importance to maintaining rigor (Gray et al., 2017). The raw data was exported from Qualtrics to SPSS, version 28. When needed, data cleaning occurred for missing items, outlying information, and survey inaccuracies (Gray et al., 2017). Scores for the IAIS portion of the survey were calculated for each participant. Discrete numerical data were used for the IAIS scores (Gray et al, 2017; Kuzma & Bohnenblust, 2004). The total IAIS scores were also converted into binary categories for the regression portion of the analysis. Some demographics were categorized into numerical systems within SPSS. Categorical data, current nursing

position, educational level, licensure, and age, to name a few, and nominal data included factors like gender, race, political preference, religious preference, and residence/setting; See Table 2 for a complete variable list.

A descriptive, correlational, and regression analysis was used for this study's data analysis. Each research question determines a specific data analysis. Research question one (RQ1) asked the degree of anti-intellectual existence among a group of working nurses. The IAIS measure determined intellectual and anti-intellectual levels, and descriptive statistics were used to determine the central tendencies of data produced from the IAIS measure. The data analysis determined the frequencies, distributions, means, standard deviations, and percentages to identify the rating of anti-intellectualism and the demographic data obtained from a group of practicing, American nurses.

The second research question (RQ2) aimed to determine what intrinsic factors nurses possessed with a high degree of anti-intellectualism. Essentially, the study looked for relationships between intrinsic factors (independent variables), like the ordinal demographic data, and the total anti-intellectualism (dependent variables) scores. Correlation procedures were used for determining the existence of relationships between intrinsic factors, and the intellectualism variable measured on the IAIS. A Spearman's Rho was utilized to examine these relationships (Gray et al., 2017; Kuzma & Bohnenblust, 2004).

The Spearman's ranking coefficient correlation, or Spearman's Rho, is a nonparametric analysis used for determining relationships between interval and ordinal data (Gray et al., 2017). The IAIS is comprised of multiple Likert scales, which are ordinal in nature; however, the total score of the total IAIS score was used for the

analysis. The total IAIS score is considered interval data and is appropriate to use for Spearman's Rho correlational testing. Further, components of the demographic data that were collected have a natural order, like levels of licensure and education, which is also appropriate for Spearman's Rho analysis. The completed list of ordinal demographic data can be found in Table 1.

The third research question (RQ3) determined which intrinsic factor indicated a likelihood of anti-intellectualism among working nurses. RQ3 aimed to determine the relationship between multiple independent variables, or intrinsic factors, and the total IAIS scores. When investigating the relationships between independent variables, which are categorical or binary, and one dependent variable, that is interval, a logistic regression analysis can be used (Gray et al., 2017). A logistic regression can determine the most powerful predictor variable that correlates with the dependent variable, the probability of falling into a specific group; for this research, the group was anti-intellectualism (Gray et al., 2017). Therefore, the use of logistic regression to classify the independent variables, demographic data, as predictor variables for the dependent variables, and IAIS scores were appropriate (Gray et al., 2017). The total IAIS was converted to a binary variable, anti-intellectual/intellectual. The categorical demographic data were converted into dummy variables for the analysis (Crowson, 2021; Osborn, 2015). For the data analysis, odds, specifically log odd, were used as predictors instead of probability, to make linear relationships (Crowson, 2021; Osborn, 2015). Odds describe the chance that an event will occur (Crowson, 2021; Osborn, 2015). The data analysis looked for statistical significance between the independent variables, and intrinsic factors, to determine the likelihood of anti-intellectualism among working nurses.

Hypothesis

Based on the research questions, the three null hypotheses were:

- H1: anti-intellectualism does not exist among practicing nurses.
- H2: There is no significant relationship between IAIS scores among practicing nurses and the demographic data.
- H3: There are no intrinsic factors that could determine the likelihood of low IAIS scores among practicing nurses over what would be expected by chance.

Ethical Considerations

Prior to implementation, the research study was submitted to The University of Southern Mississippi's IRB for approval. IRB approval was granted (protocol # 21-355; See Appendix C). The standard ethical considerations used for participant recruitment and data collection applied in the offline setting were used in this online setting (Arigo et al., 2018; Beninger, 2016; Gelinas et al., 2017). Informed consent, animosity, and undue harm were the primary focus for maintaining participants' rights.

Informed content was obtained at the beginning of the online survey on the Qualtrics platform (see Appendix G) Participants gave electronic consent by selecting the consent option on the survey. Participants were not allowed to advance to the survey portion without consent. Participants were ensured of their privacy during the consent process. The participants were also provided with the researcher's and the USM IRB's contact information, at the beginning and the end of the online survey. Participants were encouraged to make contact regarding questions or concerns (see Appendix H).

Participant privacy was maintained by the anonymity of the survey. Photographs, sensitive content, names, or personal information, outside of the demographics listed in

Appendix B, were not collected. Furthermore, little information considered socially delicate was collected (Fricker, 2012). The data collected from the online survey was housed on a password-protected computer. No URL information was collected during the data collection process.

To avoid undue harm, the name of the IAIS scale and the intentions of the research were omitted from the online survey (Beninger, 2016). Permission to use the IAIS measure has been given by its author, however, permission has not been granted to change the name of the measure. Therefore, the measure's title and the term anti-intellectualism were omitted. Transparency is an important component of social media recruiting; however, with this dissertation, the potential risk for bias, skewed data, and cause of offense is too great (Gelinas et al., 2017). Once participants completed the survey, they were informed of the true intentions of the research (see Appendix G)

Additionally, the utmost professionalism was maintained in all interactions with participants (Beninger, 2016; Fricker, 2012; Gelinas et al., 2017). Recruiting and contacting potential participants through social media, who do not have a social connection to this researcher, has a factor of creepiness that must be avoided (Arigo et al., 2018; Gelinas et al., 2017). Furthermore, all website policies for publishing content and recruitment were followed for each social media platform (Arigo et al., 2018; Gelinas et al., 2017).

Summary

The study used a descriptive, correlational design. The measurement used for this research has validity and reliability. In addition, the measurement has generalizability. The measurement was modified from a previously developed scale for broader

application to the general population and was shortened for practical purposes. The study aimed to generalize the target population using participants from multiple social media platforms. The use of social media platforms can cause limitations to the generalizability of the finding in this research. However, the recruitment efforts and tactics taken during data collection created validity of the data.

CHAPTER IV – RESULTS

Introduction

Chapter IV presents the results of the data analysis in determining the demographics and existence of anti-intellectualism among practicing American nurses from an empirical perspective. The purpose of this descriptive, correlational study was to determine the (a) degree of anti-intellectualism among practicing nurses; (b) the correlation between these nurses' demographic data and anti-intellectual levels; and (c) a potential indication, based on demographic data, of the anti-intellectualism among practicing, nurses.

The data analysis was based on the data collected over a six-week period using the Qualtrics program. The Qualtrics survey collected data electronically. Initially, 768 American nurses participated in the study. However, only 639 surveys were utilized for the analysis. The data was imported from Qualtrics and analyzed with SPSS, version 28, software. The data was cleaned and coded to fix the analysis models.

A frequency distribution, bivariate correlation (Spearman's Rho), and a logistic regression analysis were utilized. The frequency distribution analysis is used to determine the degree of anti-intellectualism among a group of practicing nurses. The Spearman's Rho looks for correlations between the demographic data and anti-intellectual levels. Finally, the logistic regression looks for likelihoods, or predictor odds, based on the demographic data, for lower IAIS scores, which indicate anti-intellectualism. The data analysis begins with a descriptive analysis, followed by a correlational analysis.

Descriptive Data

The descriptive statistics used frequency distributions for its analysis. The data analysis includes the quantified survey results based on demographic data and key findings from the anti-intellectualism (IAIS) scale. The analysis begins with demographic information, followed by anti-intellectualism scores.

Demographic Data

The highest number of nursing participants' age ranges were 25 – 34 years old at 47% (n= 303), followed by 35 – 44 years old at 29% (n=185). The frequency of 18 – 24 years old was 7% (n= 43), 45 – 54 years old at 11% (n=72), 55 and older 5% (n=36). Most of the participants were female, with 82% (n=525). The male response rate was 16% and those who identified as transgender or non-binary were at 1%. The participants who described themselves as White had the highest response rate at 88%. Those who identified as Asian were 4%. The percentage of participants who described themselves as Black was 3%. The selection of races such as Native Hawaiian, Pacific Islander, Asian, Alaskan Native, and American Indian was <1%. Participants that selected multi-ethnicities were at 8%, and those who selected Hispanic, Latino, or Spanish descent were at 13%. Regarding marital status, participants who were married or in a domestic partnership were recorded as 65%. Participants who selected single were at 27%. Those participants who selected divorced or separated were at 8%, and <1% of the participants selected were widowed.

The data results indicated that participants resided in all regions of the United States. The U.S. regions included Southern, Western, Midwestern, and Northeastern states with 1 (1%) U.S. citizens currently residing in Finland, which is indicated as

outside of the U.S. in Table 2. The southern states included Alabama, Arkansas, Delaware, the District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia. The number of participants from Southern states was 262 (41%). Western states included Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. The number of Western state participants was 148 (23%). Midwestern states included Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. The number of participants from Midwestern states wwas129 (20%). Northeastern states included Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont. The number of participants who resided in the Northeastern state wewas2 (14%). The frequency of community types was as follows: large city n = 205 (32%), suburb, near a large city, n = 187 (29%), small city or town n = 177 (28%) and rural area 70 (11%). The frequency of those who were actively involved in their community was 69% (n = 442), with 14 (2%) of the participants very involved and 124 (19%) of the participants somewhat involved in their community.

Participants were asked to identify a political ideology that closely aligns with their political beliefs. The results for political ideology were 62% (n = 369) liberal, 28% (n = 176) moderate and 9% (n = 57) conservative. Political party affiliations were 59% (n = 376) democratic, 15% (n = 95) independent, 10% (n = 65) republican, 3% (n = 17) libertarian, and 13% (n = 81) had no party affiliation. A large percentage are registered to vote, at 96%, and 89% voted in the last presidential election.

In addition to political affiliations, the survey addressed religious affiliations. The data indicates that 365 (57%) participants were not religious, 115 (18%) participants were slightly religious, 104 (16%) participants were moderately religious, and 52 (8%) participants were very religious. Those participants who indicated slightly, moderate, or very religious, n = 269 (42%), identified with Christianity, at 36% (n = 227), as the most common religious organization. Those who belong to Christian religious organizations, identified theses most common denominational areas: Catholic at 10% (n = 62) and Baptist at 5% (n = 31). Other commonly identified Christian religious organization were non-denominational at 10% (n = 63) and other at 3% (n = 21). See Table 2 for more information regarding additional religious affiliations.

The nursing participants were asked to indicate their current nursing licensure. The nurse participants who currently have a practical or vocational license were at 6%. Those who practice under a registered nurse licensure make up 89% of the nursing participants, and advanced practice registered nurses (APRNs) are 8% of the participants. Most of the nursing participants have a bachelor's degree in Nursing, at 58%, which is followed by associate degrees in nursing at 18%. A total of 12% of master's degrees, including practitioners and non-practitioners, and doctoral degrees at 4%, including practitioners and non-practitioners. All graduate practitioner degrees including master's prepared and doctoral prepared were indicated by 6% of the participants. The percentage of non-nurse practitioner's degrees was a0%. The results indicated that 111 (17%) were currently obtaining additional nursing degrees. A total of 252 (39%) nursing participants had additional, non-nursing degrees. The highest percentages of additional, non-nursing degrees were science-based degrees at 19%, closely followed by liberal arts degrees at

15%, and 26% of those degrees were bachelor's degrees. See Table 3 for more information regarding additional educational information.

The demographic survey also addressed employment information. The results indicate that 488 (76%) of the participants were employed full-time at a minimum of 36 hours per week. Over half of the participants indicated that they had health insurance through their employer at 67% (n = 429). Participants were also asked if they have multiple jobs and 127 (20%) participants indicated they had a second job. The most common secondary employment position was PRN or per diem at 14% (n =88). The three most common areas of practice were critical care at 19%, emergency care at 13%, medical-surgical, and acute care at 13%. Participants who held specialty or practice area certifications were 67% (n = 234). A small percentage of participants have recently left the workforce, 7% (n=46), and 11% (n = 67) have intentions of leaving the nursing profession. Some of the participants have considered leaving the nursing profession at a total of 28% (n = 180). See Table 3 for the complete demographic information on the collected data.

Table 3

Descriptive Statistics of Demographic Variables

Variables		Frequency %
Age		
	18 – 24	43 (7%)
	25 – 34	303 (47%)
	35 – 44	185 (29%)
	45 – 54	72 (11%)
	> or = 55	36 (5%)
Gender		
	Female	525 (82%)
	Male	101 (16%)
	Transgender or Non-binary	9 (1.4%)

Table 3 (continued).

Ethnicity		
	White	563 (88%)
	Asian	23 (4%)
	Black	17 (3%)
	Hispanic, Latino, or Spanish	80 (13%)
	Multiple Ethnicities	30 (8%)
	Native Hawaiian/Pacific Islander, Native American/Native Alaskan	4 (<1%)
Marital Status		
	Married or domestic partnership	414 (65%)
	Single (never married)	172 (27%)
	Divorced or Separated	49 (8%)
	Widowed	4 (<1%)
Location		
	Southern States	262 (41%)
	Western States	148 (23%)
	Midwestern States	129 (20%)
	Northeastern States	92 (14%)
	Outside of the U.S.	1 (1%)
Licensure		
	Registered nurses (RN)	567 (89%)
	Advanced practicing nurses (APRN)	49 (8%)
	Licensed practical or vocational nurses (LPN/LVN)	41 (6%)
Highest nursing degree or level completed	Bachelor's degree in nursing	371 (58%)
	Associate degree in nursing	117 (18%)
	Master's degree in nursing – Nurse practitioner or nurse anesthesia	54 (9%)
	Practical nursing certification	35 (6%)
	Master's degree in nursing	25 (4%)
	Doctor of nursing practice or nurse anesthesia	13 (2%)
	Doctor of philosophy in nursing	11 (2%)
	Diploma in nursing science	4 (<1%)
	Doctorate of nursing science	3 (<1%)
Current enrollment in a nursing program	Total	111 (17%)
	RN to BSN	29 (5%)
	MSN	17 (3%)
	MSN – NP	14 (2%)
	RN to MSN	14 (2%)
	RN to DNP	9 (1%)
	LPN to RN (Associates or bachelor's degrees)	8 (1%)
	DNP/DNAP	7 (1%)
	PhD	7 (1%)
	Post-master's certification	1 (<1%)
	Not enrolled	528 (83%)
Plan to enroll in nursing program within 12 months		45 (7%)

Table 3 (continued).

Other non-nursing degrees		
	Total (Yes selection)	252 (39%)
	Total Liberal Arts degrees	15%
	Total Science degrees	19%
	Total Business degrees	1%
	Total Associate degrees	5%
	Associate of Art	4 (<1%)
	Associate of Science	9 (1%)
	Associate of Applied Arts	1 (<1%)
	Associate of Applied Science	15 (2%)
	Associate of General Studies	1 (<1%)
	Total bachelor's degrees	26%
	Bachelor of Arts	82 (13%)
	Bachelor of Science	76 (12%)
	Bachelor of General Studies	3 (1%)
	Bachelor of Business	5 (1%)
	Total master's degrees	5%
	Master of Art	7 (1%)
	Master of Science	18 (3%)
	Master of Applied Science	4 (1%)
	Master of Business Administration	4 (1%)
	Doctor of Philosophy	2 (<1%)
Nursing specialty certification		
		234 (67%)
Employment status		
	Full-time (36 or more hours per week)	488 (76%)
	Part-time (24 to 36 hours)	
	PRN or per diem	93 (15%)
	Full-time student	38 (6%)
	Contract	36 (6%)
	Unemployed not looking for work,	18 (3%)
	homemaker, or unable to work	12 (2%)
	Unemployed currently looking for work	
	Retired	5 (<1%)
		5 (<1%)
Travel Nurse		
	Total nursing of travel nurses	54 (9%)
	1-2 contracts per year	18 (3%)
	3-4 contracts per year	33 (5%)
	5-6 contracts per year	1 (<1%)
	> 6 contracts per year	2 (< 1 %)
Nurses with multiple jobs		
	Total	127 (20%)
	Second job – PRN or per diem	88 (14%)
	Second job – part-time	18 (3%)
	Second job – full time	3 (<1%)
	Two additional jobs – PRN	5 (1%)
	Second job – non-nursing	1 (<2%)
Health insurance through a job		
		429 (67%)

Table 3 (continued).

Nursing specialty/practice area	Critical care	122 (19%)
	Emergency care	83 (13%)
	Medical-Surgical care	80 (13%)
	Pediatrics	49 (8%)
	Acute care specialties	46 (7%)
	Telemetry/cardiology	40 (6%)
	Mental and behavioral health	39 (6%)
	Gerontology, long-term and palliative care	38 (6%)
	Women's Health	37 (6%)
	Perioperative care	35 (6%)
	Interventional Specialties	19 (3%)
	Primary care	17 (3%)
	Post-acute care	12 (2%)
	Academia and research	3 (<1%)
	Informatics	2 (<1%)
	Corrections and Forensics	2 (<1%)
	Case Management	2 (<1%)
	Aesthetics	1 (<1%)
Recent left workforce		46 (7%)
Intentions of leaving workforce	No	390 (61%)
	Maybe	180 (28%)
	Yes	67 (11%)
Pay rate/income affected by COVID-19	Yes	341 (53%)
	No	295 (46%)
Household income	< $70,000	24 (6%)
	$70,000 - $79,999	16 (3%)
	$80,000 - $89,999	27 (4%)
	$90,000 - $99,999	29 (6%)
	$100,000 - $149,999	151 (24%)
	$150,000 - 199,999	96 (15%)
	$200,000 - $299,999	43 (7%)
	> $300,000	22 (3%)
Members in household	1	84 (13%)
	2	253 (40%)
	3	110 (17%)
	4	114 (18%)
	5	50 (8%)
	6	18 (3%)
	7 or more	6 (1%)

Table 3 (continued).

Primary source of healthcare trends that affect nursing practice	Professional associations	183 (29%)
	Employer	138 (22%)
	Experts in the field	80 (13%)
	Social media	78 (12%)
	Professional peers	63 (10%)
	Mainstream media (TV, radio, newspapers)	38 (6%)
	Governmental agencies	26 (4%)
	Other	19 (3%)
	Social groups including family and friends	6 (<1%)
Community/location type		
	Suburb, near a large city	205 (32%)
	Large city	187 (29%)
	Small city or town	177 (28%)
	Rural area	70 (11%)
Community involvement		
	Involved in community	195 (31%)
	Somewhat involved	124 (19%)
	Moderately involved	57 (9%)
	Very involved	14 (2%)
Political ideology		
	Liberal	396 (62%)
	Moderate	176 (28%)
	Conservative	57 (9%)
Political Party affiliation		
	Democrat	376 (59%)
	Independent	95 (15%)
	None	81 (13%)
	Republican	65 (10%)
	Libertarian	17 (3%)
	Green party	2 (<1%)
Voting		
	Registered to vote	615 (96%)
	Voted in last presidential election	571 (89%)
Level of religiousness (considers self religious)	Not religious	365 (57%)
	Slightly religious	115 (18%)
	Moderately religious	104 (16%)
	Very religious	52 (8%)
	Do not know	3 (<1%)
Religious organization		
	Christianity	227 (36%)
	Other	20 (3%)
	Judaism	10 (2%)
	Not part of a religious organization	8 (1%)
	Islam	2 (<1%)
	Asian folk religion	2 (<1%)

Table 3 (continued).

Christianity denomination		
	Non-denominational	63 (10%)
	Catholic	62 (10%)
	Baptist	31 (5%)
	Other	21 (3%)
	Methodist	16 (3%)
	Episcopalian, Presbyterian, or Anglican	13 (2%)
	Evangelical	
	Lutheran	7 (1%)
	Pentecostal	5 (<1%)
		5 (<1%)

IAIS data

Each of the 10 statements on the IAIS was scored with a Likert scale that had a range of 1 through 5. Lower scores indicated that the IAIS statement was false, and high scores indicated that the IAIS statement was true, except for four statements with reverse scoring. The total IAIS score was calculated and used for the analysis in SPSS.

Lower scores on the IAIS indicate higher degrees of anti-intellectualism. Scores less than 30 indicate anti-intellectualism. Higher scores on the IAIS indicate higher degrees of intellectualism, and therefore low degrees of anti-intellectualism. IAIS scores greater than 30 indicated low degrees of anti-intellectualism. According to the data analysis, 35% (n = 222) of nursing participants scored low on the IAIS scale, indicating higher degrees of anti-intellectualism. The highest levels of anti-intellectualism (the lowest IAIS scores) were 1%. Most of the nursing participants, at 65% (n = 417), had higher scores on the IAIS scale with the least degrees of anti-intellectualism at 3%. A small portion of participants had more neutral tendencies at 4% (n = 25).

The distribution of the total IAIS scores was arranged into a histogram for a visual interpretation of the data, see Figure 1 below. The frequency of the IAIS scores appears

to be a slightly left skew. The frequency of higher IAIS scores fell into the upper boundaries of the data set. Additionally, the central tendencies of the total IAIS score and the frequencies of each of the ten IAIS statements are listed in Table 3 Descriptive Statistics of Intellectual-Anti-intellectual Scores (IAIS).

The frequency of the lower IAIS score indicates that anti-intellectualism does exist among a group of practicing nurses. The findings indicate that 35% of this study's participants were found to score within the anti-intellectualism range. Therefore, the null hypothesis stating that anti-intellectualism does not exist among practicing nurses is rejected.

The demographic data was heavy on categorical variables. Therefore, some of the demographic data were cross-tabulated with total IAIS scores to provide a better picture of patterns and possible correlations in the data set. The IAIS scores were categorized into anti-intellectualism and intellectualism. The demographic variables presented in Table 5 were specifically chosen because they represent the only independent variables determined to have statistically significant correlations with the total IAIS score or variable use in the discussion in Chapter V. The variables with significant correlations are discussed further in this chapter. See Table 5 for more information on the cross-tabulation.

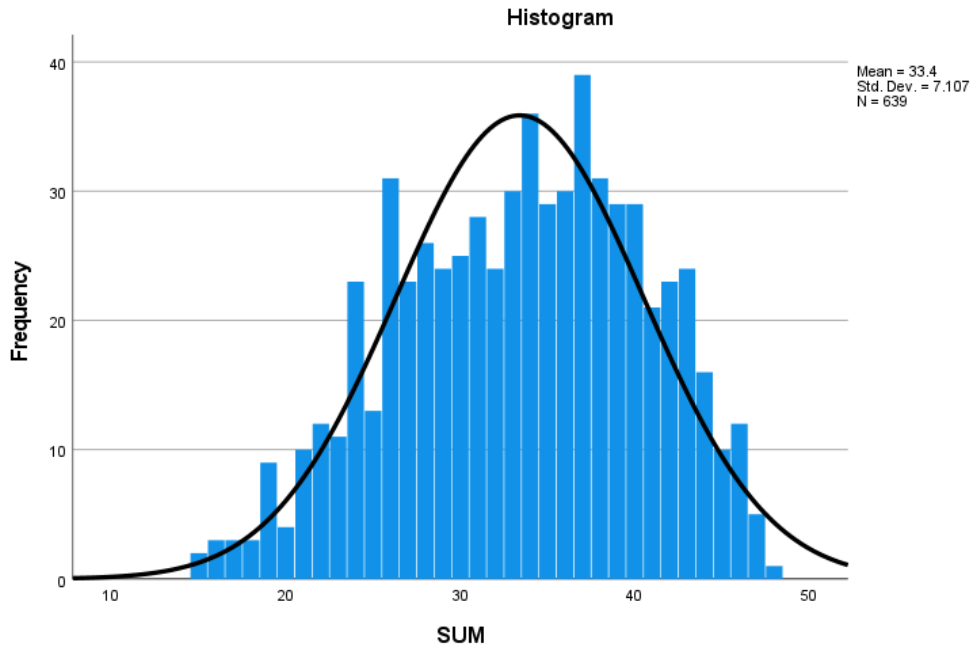

Figure 1. Histogram of Total IAIS Scores.

Histogram created in SPSS of IAIS total scores.

Table 4

Descriptive Statistics of Intellectual Anti-intellectual Scores (IAIS)

Variables		Central Tendency
Total IAIS scores		
	Mean	33.4
	Median	34
	Mode	37
Variable		**Frequency %**
Frequency scores		
	Anti-intellectualism	222 (35%)
	Intellectualism	417 (65%)
Scores with additional components		
	Neutral tendencies	4%
	Very anti-intellectual	1%
	Anti-intellectual	30%
	Very intellectual	3%
	Intellectual	62%
Q1: Working on difficult intellectual problems is enjoyable and stimulating for me.		
	Completely false	7 (1%)
	Somewhat false	18 (3%)
	Neither true or false	42 (7%)
	Somewhat true	319 (50%)
	Completely true	253 (40%)
	Mean	4.24

Table 4 (continued).

Q2: I generally find physical or recreational activities more satisfying than intellectual activities. (R)	Completely false	36 (6%)
	Somewhat false	181 (28%)
	Neither true or false	215 (34%)
	Somewhat true	151 (23%)
	Completely true	56 (9%)
	Means	2.98
Q3: I tend to feel somewhat bored and impatient when dealing with remote, theoretical problems. (R)	Completely false	43 (7%)
	Somewhat false	215 (34%)
	Neither true or false	130 (20%)
	Somewhat true	205 (32%)
	Completely true.	46 (7%)
	Mean	3.01
Q4: Intellectual discovery is ok, but I prefer other forms of excitement. (R)	Completely false	44 (7%)
	Somewhat false	246 (39%)
	Neither true or false	170 (27%)
	Somewhat true	147 (23%)
	Completely true	31 (5%)
	Mean	3.2
Q5: I'm probably the sort of person who would find it thrilling to be engrossed in a research project.	Completely false	76 (12%)
	Somewhat false	162 (25%)
	Neither true or false	81 (13%)
	Somewhat true	223 (35%)
	Completely true	97 (15%)
	Mean	3.16
Q6: I deliberately seek out sources of intellectual stimulation.	Completely false	8 (1%)
	Somewhat false	55 (9%)
	Neither true or false	71 (11%)
	Somewhat true	293 (46%)
	Completely true	212 (33%)
	Mean	4.01
Q7: I have more exciting things to do than sit around and think all day long. (R)	Completely false	52 (8%)
	Somewhat false	194 (30%)
	Neither true or false	182 (29%)
	Somewhat true	171 (27%)
	Completely true	40 (6%)
	Mean	3.07
Q8: I feel compelled to work on conceptual problems, even when I don't have to.	Completely false	49 (8%)
	Somewhat false	175 (27%)
	Neither true or false	139 (22%)
	Somewhat true	225 (35%)
	Completely true	50 (8%)
	Mean	3.08

Table 4 (continued).

Q9: One of my favorite activities is discovering alternative ways to explain a particular phenomenon.	Completely false	70 (11%)
	Somewhat false	137 (21%)
	Neither true or false	123 (19%)
	Somewhat true	234 (37%)
	Completely true	75 (12%)
	Mean	3.17
Q10: The process of examining a concept in great detail is generally unappealing to me. (R)	Completely false	101 (16%)
	Somewhat false	285 (45%)
	Neither true or false	97 (15%)
	Somewhat true	139 (22%)
	Completely true	16 (3%)
	Mean	3.50

Table 5

Cross tabulation of IAIS Categories and Demographic Variables

	Age = N (%)					
	18 – 24	25 – 34	35 – 44	45 –54	55 –64	65-74
Anti-intellectualism	21 (49%)	118 (39%)	60 (32%)	15 (21%)	6 (22%)	2 (22%)
Intellectualism	22 (51%)	184 (61%)	125 (68%)	57 (79%)	21 (78%)	7 (78%)
	Location by regions = N (%)					
	Southern	Western	Midwest	Northeast	Outside US	
Anti-intellectualism	114 (45%)	67 (45%)	46 (36%)	33 (36%)	0 (0%)	
Intellectualism	138 (55%)	81 (55%)	83 (64%)	59 (64%)	1 (100%)	
	Licensure = N (%)					
	LPN		RN		APRN	
Anti-intellectualism	17 (42%)		236 (43%)		21 (43%)	
Intellectualism	23 (58%)		314 (57%)		28 (57%)	
	Highest degree level = N (%)					
	Cert.	Diploma	Associate	Bachelor’s	Master’s	Doctorate
Anti-intellectualism	14 (40%)	0	45 (38%)	128 (35%)	28 (35%)	5 (19%)
Intellectualism	21 (60%)	4 (100%)	73 (62%)	242 (65%)	51 (65%)	22(81%)

Table 5 (continued).

	Political Party = N (%)					
	Republican	Libertarian	Green Party	Democrat	Indep	None
Anti-intellectualism	39 (60%)	5 (29%)	2 (100%)	120 (32%)	31 (33%)	27 (32%)
Intellectualism	26 (40%)	12 (71%)	0	255 (68%)	64 (67%)	58 (68%)

	Primary source for health care trends = N (%)				
	Profess associations	Employer	Experts in the field	Govt agencies	Social groups
Anti-intellectualism	59 (32%)	66 (48%)	16 (20%)	12 (46%)	28 (36%)
Intellectualism	124 (68%)	72 (52%)	64 (80%)	14 (54%)	50 (64%)

	Primary source for health care trends (continued.) = N (%)			
	Other	Social Media	Professional peers	Other Media
Anti-intellectualism	4 (17%)	28 (36%)	59 (32%)	17 (45%)
Intellectualism	19 (83%)	50 (64%)	124 (68%)	21 (55%)

Numbers are based on frequencies.

Correlational Data

A correlational analysis was conducted between the total IAIS score and the demographic variables listed in Table 1 and Table 2. A Spearman's Rho was used to measure monotonic relationships between the total IAIS scores and the ordinal demographic variables. Logistic regression was used to predict a binary independent variable, from the total IAIS scores, and the demographic, and categorical variables.

Spearman's Rho

A Spearman's Rho correction analysis was used to determine a significant relationship between demographic variables and the total IAIS score. Two variables were found to have statistical significance – age a weak, positive correlation with a Spearman $\gamma = 0.147$ and significant of <0.001 on a two-tailed test, and level of religiousness, or religiosity a weak, negative correlation at $\gamma = -0.177$, $p = 0.001$. Therefore, as age

increases, the IAIS scores increase, indicating more intellectualism. As religiosity increased, those who tend to be more religious had a decrease in IAIS scores. Both variables have a weak correlation, as the further, away the Spearman's coefficient is away from 1, the weaker the relationship (Gray, et a., 2017). For this study's objectives, both independent variables have a correlation with the IAIS score, though weak, leading to the rejection of the null hypothesis indicating no significant relationships between the dependent and independent variables.

Logistic Regression

A logistic regression analysis was used to predict the probability, based on odds, that practicing nurses would fall into the anti-intellectual category given demographic, predictors, and variables (Gray et al., 2017). The analysis was performed between the categorical demographic variables and the IAIS scores. The categorical demographic variables used dummy variables for the analysis (Gray et al., 2017). The total IAIS score was converted into a binary variable category, anti-intellectual and intellectual, from the total IAIS scores. The target group was anti-intellectuals, and the reference group was intellectuals. The goal of the logistic regression analysis was to determine predictors that would correlate with the likelihood that the participant if randomly selected, would fall into the anti-intellectual group.

Five independent variable groups were considered statistically significant. Those groups were age, U.S. regional location, political party affiliations, additional non-nursing degrees, and information obtainment for healthcare trends. Each model was determined to have a goodness of fit by using the Omnibus and Hosmer and Lemeshow test (Crowson, 2021; Osborn, 2015). The Omnibus test determines the likelihood ratios

from a chi-squared test by comparing the null model to predictor models (Crowson, 2021; Osborn, 2015). The variable models were determined to be statistically significant by the Omnibus test (Crowson, 2021; Osborn, 2015). The Hosmer and Lemeshow also use chi-squared testing, however with Hosmer and Lemeshow testing goodness of fit is determined with higher p values (Crowson, 2021; Osborn, 2015). If the model does not produce statistical significance from the Hosmer and Lemeshow, then the model is considered a good fit (Crowson, 2021; Osborn, 2015). The Hosmer and Lemeshow should be used with caution but is beneficial for testing analysis (Crowson, 2021; Osborn, 2015). After each model was determined to have a goodness of fit, each predictor variable (demographic data), was assessed for significance.

Age. The age variable was comprised of five age categories. Three of the five age categories had a p-value < 0.05. The age categories of 35 – 44, 45 – 54, and 55 – 64 were negative, significant predictors for anti-intellectualism; each age category had a significant difference. The age variable was converted into dummy variables, and the slope (β) for each category represents the difference between the categories in terms of the odds of not score in the anti-intellectual range on the IAIS. Additionally, the three significant age categories had an odds ratio of less than 1 indicating that anti-intellectualism, or low IAIS, is less likely to occur as the predictor variable, age, is compared to the 18 – 24 age group.

The age range of 35 – 44 had a regression rate of β = -.687, a p-value of 0.045, and an odds ratio of 0.553 with a confidence interval of 0.257 to 0.985. The odds ratios for the age category of 35 – 44 indicate that for every 1 unit increasing on this predictor the odds of anti-intellectualism increase by 0.553. However, the age category has a

negative correlation meaning that the odds of anti-intellectualism decrease. The age range of 45 – 54 had a regression rate of β = -1.282, p = 0.003, and an odds ratio of 0.276 within the confidence interval of 0.121 to 0.629. The odds ratios for the age category of 45-54 indicate that for every 1 unit increasing on this predictor the odds of anti-intellectualism increase by 0.276. The age range of 55 – 64 had a regression rate of β = -1.206, p = 0.037, and an odds ratio of 0.299 within the confidence interval of 0.101 to 0.887. The odds ratios for the age category of 55 – 64 indicate that for every 1 unit increase on this predictor the odds of anti-intellectualism increase by 0.299. As the age range increased, the odds of falling into the anti-intellectual group decreased.

Location. The Midwestern regional location is a negative significant predictor of the probability of anti-intellectualism. The regional location had a slope (β) of -0.609 and an odds ratio of 1.839. For every 1-unit increment on the predictor, the odds of anti-intellectualism increase by 1.839. For the location variable, the odds of anti-intellectualism are decreasing, and practicing nurses from the Midwestern region are less likely to be anti-intellectual than in other U.S. regions. See Table 6 for more statistical information about predictor variables.

Non-Nursing Degrees. Those nursing participants who indicated that they had an additional, non-nursing degree were less likely to score in the anti-intellectual range than those who did not have additional degrees. The classification table indicates that participants who had additional, non-nursing degrees were predicted to fall into the intellectual category 100% of the time. The indication of non-nursing degrees had a negative, significant correlation (β = -0.484, p = 0.006). However, the specific type of non-nursing degrees did not test as significant. See Table 6 for more information.

Primary Source for Health Care Trends That Affect Practice. The sample group of practicing nursing were asked to indicate their primary source of healthcare trends that affect their nursing practice. The SPSS classification table indicated a 99.3% specificity of the model for classifying health care information concerning the dependent variable. Out of the nine options for health care trends, four options were statistically significant; those options were professional associations, field experts, professional peers, and others. The four options for health care trends were negatively significant with an odds ratio that indicates a decrease in the probability of being anti-intellectual as the predictor variable increases when compared to the other options. See Table 6 for additional information.

Political Party Affiliation. The political party affiliations had four party options that were negatively significant. The negative coefficients suggest that the participants who indicated libertarian, democrat, independent, or no party affiliations were less likely to be anti-intellectual than when compared to other party affiliations, including the republican and green parties. All four options for party affiliation had an odds ratio of less than one, indicating a decrease in the probability of being anti-intellectual, as scores on the predictor increase. The democratic, independent and no party affiliations had p values of < 0.001. The overall classification total for party affiliations was 67.3% with 93% of cases correctly classified as intellectual and 17.6 % of cases correctly classified as anti-intellectual. See Table 6 for more statistical information about predictor variables.

The logistic regression found significant correlations between five dependent (predictor) variables and the independent variable. However, all five correlations were negative. These negative correlations indicate the odds of being anti-intellectual are lower than the odds of being intellectual. According to the analysis, the demographic variables,

or intrinsic factors, could not determine a likelihood of anti-intellectualism among practicing nurses over what would be expected by chance. Therefore, the null hypothesis is not rejected. However, the logistic regression could determine the likelihood of intellectualism among practicing nurses from the demographic variables.

Table 6

Single Item Logistic Regression Analysis (Predictive Items)

Variable	Regression rates (β)	Significance (P-value)	Odds Ratio (Exp (B))	Odds Confidence Intervals
Age:				
35 – 44	-0.687	0.045	0.553	0.257 - 0.985
45 – 54	-1.282	0.003	0.276	0.121 - 0.629
55 – 64	-1.206	0.037	0.299	0.101 - 0.887
Location:				
Midwestern region	-0.609	0.010	1.839	1.157 – 2.923
Additional non-nursing degree:				
Yes	-0.484	0.006	0.616	0.437 – 0.869
Source for health care trends:				
Professional associations	-0.656	0.005	0.519	0.329 – 0.819
Field Experts	-1.299	<0.001	0.518	0.144 – 0.518
Professional peers	-.0991	0.003	0.371	0.192 – 0.717
Other	-1.471	0.011	0.230	0.074 – 0.710
Political party affiliation:				
Libertarian				
Democrat	-1.281	0.030	0.278	0.087 – 0.882
Independent	-1.159	<0.001	0.314	0.183 – 0.539
No Party	-1.130	<0.001	0.323	0.168 – 0.622
	-1.170	<0.001	0.310	0.158 – 0.609

Summary

Chapter IV reports the statistical findings from a quantitative data analysis based on a descriptive, binate, and regression analysis. The data analysis was driven by the purpose of this study and the presented research questions. The purpose was to investigate the dependent variable, anti-intellectualism, and 25 independent variables comprised of generalized demographic data and nursing-specific demographic data. The research questions stipulated an analysis from a descriptive and correlational approach. Chapter IV presented this study's findings. Chapter V discusses the conclusions of those findings.

CHAPTER V – CONCLUSION

Introduction

As the COVID-19 pandemic now transitions to an endemic, nurses have been the subject of negative headlines. The negative press in circulation about nurses, typically, pertains to controversial ideas regarding COVID-19, and the existence of anti-intellectualism within the profession. Anti-intellectualism within the nursing profession can negatively impact the prestige that the profession has worked for as well as cause irreparable harm to those the profession serves. The recent negative attention to the nursing profession, regarding anti-intellectualism, inspired this dissertation.

The literature review revealed that anti-intellectualism had not been empirically investigated in a group of practicing nurses. Therefore, the overall purpose of this study was to examine anti-intellectualism among a group of working nurses. This study had three objects: (1) to determine if anti-intellectualism existed among a group of practicing nursing and the depth in which it exists; (2) to determine if there were any significant relationships between anti-intellectualism and demographic variables; and (3) determine if the specific demographic variable would indicate a likelihood of anti-intellectualism.

Chapter V discusses the conclusions of this study's findings regarding anti-intellectualism among practicing nurses using quantitative methods. The discussion of these findings is laid out questions. Additionally, Chapter V discusses the limitations and the need for additional research in this area.

Discussion

RQ1: To what degree does anti-intellectualism exist in a group of practicing nurses?

A descriptive data analysis was utilized in determining the degree of anti-intellectualism among a group of American practicing nurses. A group of practicing nurses were asked to complete an intellectual-anti-intellectual scale (IAIS) – a series of Likert scales that determined intellectual or anti-intellectual scores. The total scores from the IAIS were calculated, and the participants were categorized as intellectual or anti-intellectual. Higher IAIS scores fall within the intellectual range and lower scores fall within the anti-intellectual range. The data analysis indicated that 222 of the nursing participants scored low on the IAIS. Therefore, anti-intellectualism does exist within a group of working nurses at a frequency of 35%.

The sample of working nurses, used for this dissertation, was comprised of three types of nursing licensures. The three groups of nurses were LPN/LVNs, RNs, and APRNs. For this study, the sample group had 8% of LPN respondents, 89% RN respondents, and 6% of APRN respondents. In reference to Table 5, from Chapter IV, anti-intellectualism was found in 42% of the LPN/LVN respondents, 43% of the RN respondents, and 43% of the APRNs. The cross-tabulation revealed similar percentages of anti-intellectualism among all three groups of nurses. The findings indicate that the degree of anti-intellectualism does not vary between nursing licensure types. Further, nursing educational levels had a similar frequency pattern.

The participants with practical nursing certifications scored in the anti-intellectual range at 40%. Participants with bachelor's degrees and master's degrees in nursing scored in the anti-intellectual range at 35%, and 38% of participants with associate

degrees score in the anti-intellectual range. The percentages of anti-intellectual scores among nursing certifications and associates, Bachelor's and Master's Degrees had little variation. Those participants with doctorate degrees had fewer rates of anti-intellectualism, at 20%, and participants with diplomas degrees did not score within the anti-intellectual range. However, less than 1% of the nursing participants indicated they had a diploma; given that such a small percentage of participants had diploma degrees, this variable does not provide much of an impact on the findings. The consistency of anti-intellectualism found between the practical certification and the associate, Bachelor's, and Master's Degrees was surprising and was not consistent with the empirical literature regarding anti-intellectualism.

The literature that addresses anti-intellectualism among college students found empirical evidence that those with higher educational levels are generally, less likely to be anti-intellectual (Laverghetta et al., 2007; Laverghetta, 2015, Marques et al., 2017). Laverghetta's (2007, 2015) studies did use a different tool that measures anti-intellectualism among students; however, the IAIS is a descendant of that tool. This study hypothesized that educational levels made a difference in degrees of anti-intellectualism based on the literature. However, this study proved otherwise.

In general, the expectation of higher education is to reduce anti-intellectualism, but the findings indicate little difference in the frequency of anti-intellectualism across degree levels. Further, the study results yielded little variation between nurses with vocational training and those with academic training, which is a surprising finding considering that academic training is widely thought to be superior. Additionally, the findings resulted in the same frequencies of anti-intellectualism among those with

undergraduate and graduate nursing degrees, except at the doctoral level. Participants with doctoral degrees had a larger change in anti-intellectual levels when compared to the other educational groups. The decrease in anti-intellectualism among those with doctorate degrees appears logical, considering that doctoral degrees bear a significant resemblance to more traditionally scholastic fields. Yet, nurses with an associated level of education were found to have very similar degrees of anti-intellectualism to those with a master's degree education. The data suggest that the nursing educational level makes little difference in the existence of anti-intellectualism, except at the doctoral level. The lack of variation in the degrees of anti-intellectualism in education and licensure variables also plays a role in the conclusions discussed further in Chapter V.

RQ2: Are there significant relationships between demographic variables that correlated with anti-intellectualism among a group of practicing nurses?

A significant relationship was found between two demographic variables – age and religiosity, and the IAIS scores. However, the relationship between both the demographic variables and the IAIS scores are very weak. Nonetheless, the findings do align with some of the results found in the literature review.

Marques et al. (2017) identified age as an indicator of anti-intellectualism. Marques et al., (2017) specifically, stated that younger individuals are more likely to experience anti-intellectualism. The finding for this study found a positive correlation between age and IAIS scores, meaning that older participants were less anti-intellectual than younger participants. The anti-intellectual trend in the age variable can also be seen in Table 5. The cross-tabulations between age and IAIS scores show a decrease in the frequency of anti-intellectualism as the age range increases. However, the percentage of

anti-intellectualism becomes stagnant in the 55-64 (22%) and the 65-74 (22%) age groups, though it is still within 1% of the previous age group (45-54). The stagnation is likely due to the limited number of participants in those age groups; the 55-64 age group was represented at 4% and the 65-74 age group at 1%.

Religiosity was the other demographic variable that was found to have a relationship with anti-intellectual scores. Participants were asked to rank their level of religiosity from not religious = 0 to very religious = 3 on a Likert scale. Participants also had an option to select 'do not know', but those scores were not used in the correlation analysis. The findings indicated a negative correlation with IAIS scores, ergo, as religiosity increased higher degrees of anti-intellectualism were increased. The frequency trends of the anti-intellectualism, in Table 5, present an increase in anti-intellectualism frequency among those who are not religious (28%), to those who are slightly religious (45%). The frequency trends of anti-intellectualism for moderately religious (44%) and very religious (42%) are less frequent than those who are slightly religious (45%) but are within proximity. The responses for not religious were 57% of the data collected and 8% were very religious; the wide range of these numbers likely affected the trends in the cross-tabulation and the strength of the correlation.

The findings, regarding religiosity, are also supported in Eigenberger and Sealander's (2001) anti-intellectual research and have a relationship with the concepts of Hofstadter's (1963) work. Eigenberger and Sealander's (2001) work found positive correlations between student anti-intellectualism and dogmatism in their empirical study. Eigenberger and Sealander's (2001), also, used a different measurement tool for anti-intellectualism, however, the IAIS tool used in this research was modified from

Eigenberger and Sealander's (2001) SAIS tool (Marques et al., 2017). Additionally, Hofstadter's (1963) work addresses religion as one of the three contributing social systems of anti-intellectualism. According to Hofstadter (1963) and Rigney (1991), increased religiosity, or piety, can be a form of anti-intellectualism, called anti-rationalism. Anti-rationalism is a form of and contributor to stronger anti-intellectual tendencies. Hofstadter (1963) and Rigney (1991) support the idea that an increase in piety can lead to an increase in anti-rationalism, therefore, anti-intellectualism. Hofstadter's (1963) work on anti-intellectualism served as the framework for this dissertation, and though the correlation between anti-intellectualism and religiosity is weak, it is significant in relation to the framework. The significance of the finding, itself, speaks to the larger concepts of this dissertation, which is to say that the theoretical framework is present in the empirical findings.

The lack of empirical findings also ties back to the theoretical framework. Hofstadter (1963) believes that anti-intellectualism is a common problem within the educational system. Hofstadter (1963) attributed the catalyzation of anti-intellectualism to the democratization of intellect, via the educational systems. The democratization of intellect has moved the educational system to a more universal, standardized system that no longer combats anti-intellectualism through specialized intellectual cultivation (Hofstadter, 1963). As addressed above, anti-intellectualism was found among a group of practicing nurses who have completed some form of systematic nursing training or education, and licensure process. Yet, the level of anti-intellectualism had little variation between those with nursing certifications and those who completed college with nursing degrees. Moreover, the data indicate that little to no variation was found between the

different nursing degrees (Associate, Bachelor, or Master's Degrees). In addition to the frequency analysis, the education variable did not have any correlations with the IAIS scores. The literature review suggests that nursing education's practical approach to learning, simply, effecting latent anti-intellectualism (Racine & Vandenberg, 2021). This research's findings support Racine and Vandenberg's (2021) belief that nursing education may be a contributor to anti-intellectualism among nurses.

RQ3: Which demographic data variables indicate a likelihood of anti-intellectualism among practicing nurses

The research analysis did not find demographic data that indicated a likelihood of anti-intellectualism among a group of practicing nurses. However, the analysis did find demographic data that indicated a likelihood of not having anti-intellectual tendencies. Out of the 25 different demographic variables, only 5 of the variables indicated significant correlations with the independent variables. Those 5 variables were age, location, additional non-nursing degrees, primary source for health care trends, and political party affiliation. The statistically significant data findings, analyzed with logistic regression, had negative correlations with anti-intellectualism. Essentially, the data analysis revealed that certain demographic variables were indicators for scoring higher on the IAIS scale, within the intellectual range. Since the focus of this dissertation pertains to anti-intellectualism, and the analysis was based on an odds ratio, the correlation finding is interpreted as a decreased likelihood of having anti-intellectual tendencies.

Age, again, was found to correlate with the IAIS scores. For the logistic regression analysis, age was found to have a negative regression, indicating that the higher age groups, when compared, were less liking to have anti-intellectual tendencies.

The findings from the regression analysis support the findings from the bivariate analysis. In addition, the relationships between age and anti-intellectualism were also supported in the literature, as addressed under research questions two (RQ2) section of this chapter. For these findings, age can be a predictor of higher anti-intellectual scores, and as a participant increases in age, they are less likely to have anti-intellectual tendencies.

A surprising result was the correlation between U.S. location and the IAIS scores. For the logistic regression analysis, participants from the Midwest were less likely to have anti-intellectual tendencies when compared to other regions of the U. S. The odds ratio (1.839) for the Midwest predictor is > 1, ergo the odds of not having anti-intellectual tendencies are increasing. The literature review for this dissertation does not have evidence to support this finding. An explanation of this correlation – IAIS scores and the Midwest regional location, could not be justified after additional research.

The analysis of those participants who indicated an additional non-nursing degree, from a yes/no indicator, found a correlation with the IAIS score. The finding indicated a negative relationship with the target variable, anti-intellectualism. Therefore, those nurses with an additional non-nursing degree are more likely to not have anti-intellectual tendencies, than those who only have nursing degrees. For the participants with additional non-nursing degrees, the degree types varied from associates to doctoral degrees; see Table 3 for the complete list of additional non-nursing degrees. However, the specific types of non-nursing degrees were not found to have significant correlations with the IAIS scores, which is likely due to the wide variability of the non-nursing degree type and the small percentage in data frequencies.

The easy explanation for the findings regarding additional non-nursing degrees is that more years spent in the education system and an increase in an individual's age are presumed to lower anti-intellectualism. Those participants who have an additional non-nursing degree are expected to be older, especially when considering the rise in popularity of accelerated nursing programs. Accelerated nursing programs are fast-track nursing degrees for those who already have a non-nursing degree. As discussed at the top of this chapter, increased age correlated with increased ISIA scores, or less anti-intellectualism, and was supported in the literature (Marques et al., 2017). The literature also supports lower anti-intellectual levels with higher degree obtainment, as discussed earlier in Chapter V (Laverghetta et al., 2007; Laverghetta, 2015, Marques et al., 2017). However, Laverghetta and Nash (2010) found that more students who majored in more practical degrees, like nursing, had more anti-intellectualism when compared to those students with more theoretical degrees. Liberal arts and other science-based degrees traditionally place more value on theoretical interpretation over practical skill development and could explain the link between non-nursing degrees and IAIS scores. However, the data from this study is limited for that comparison and the significant data found conflicts with these ideas.

In accordance with this research's findings, more time spent in a nursing (only) educational system does not necessarily lower the frequency of anti-intellectualism, except at the doctoral level. Further, the lack of significance for data regarding nursing education data conflicts with the age correlations found. For example, an individual who has a master's degree in nursing is typically older than a person with a bachelor's degree in Nursing, yet anti-intellectual frequencies are the same. The conclusion between age

and degree level is limited because it did not fall within the nature of this study, therefore this idea is purely speculative. The data is perhaps better explained by a more viable issue that the nature of nursing education is so steeped in a practical approach it does not affect anti-intellectualism. Racine and Vandenberg (2021) suggest that nursing education's practicality is a link to nursing anti-intellectualism. From Hofstadter's (1963) lens, the findings would indicate that nursing education is generating anti-intellectualism.

One striking similarity between the findings and Hofstadter's (1963) work is the correlation between the IAIS scores and the primary source of healthcare trends that affect practice. Hofstadter (1963) describes anti-intellectualism as the "resentment and suspicion of the life of the mind, and those who are considered to represent it; and a disposition to constantly minimize the value of that life" (p. 7). Therefore, those who value intellectualism and the people who are intellectual representatives are considered intellectual. The participants who chose the options: professional associations, field experts, professional peers, and others as a source for health care trends were less likely to have anti-intellectual tendencies than those who chose employers, coworkers, friends, or family. See Table 4 for the complete list of options about health care trends. Further, the variable of field experts had a significant of $p = < 0.001$. These results appear axiomatic in that they empirically support Hofstadter's (1963) concept of anti-intellectualism. The findings pertaining to health care trends validate this study's, overall, purpose.

The correlation between political party affiliations and the total IAIS score was an expected finding. The literature review and the framework of this study indicated a high probability of anti-intellectualism association with political ideology. Eigenberger and

Sealander (2001) and Laverghetta et al. (2007) found significant correlations between anti-intellectualism with political and economic conservatism, and Hofstadter (1963) and Rigney (1991) address the politics and powerful social system for anti-intellectualism. The results of this study indicated that when comparing political party affiliations those who have connections to the libertarian, democratic, independent party or indicated no party were less likely to be anti-intellectual. Democratic, independent and no party affiliations had p values of < 0.001, indicating a significant difference between the groups, which includes the republican and green parties as well as the other variables listed above.

As addressed in the former parts of this chapter, the data that did not result in statistical significance is just as relevant as the data was significant. Something important to note is the lack of significance regarding gender and nursing practice. The nursing literature, discussed in Chapter II, addressed the domination of females within the profession, and the culture of the female gender as potential factors for nursing anti-intellectualism. The findings from this study's analysis found no indication that gender correlated with IAIS scores, which was also noted in Marques et al. (2017) study on anti-intellectualism.

Nursing practice was addressed with approximately one-third of the questions on the demographic questionnaire. The demographic questionnaire had over 10 questions related to nursing practice, including employment and income. The content for these questions was investigated for their relevance to the practical, or reflective instrumentalization, component of anti-intellectualism. The data regarding employment was not determined to be significant to this research. However, anti-intellectualism, in the

form of practice, is mostly likely amalgamated into nursing education. Hofstadter (1963) believes that educational systems are vectors for anti-intellectualism because they are influenced by anti-rationalism, anti-elitism, and practicality. Nevertheless, the research, regarding nursing, suggests that nursing education is the embodiment of practicality. Consequently, the nursing education systems represent the source and spread of practical anti-intellectualism.

Limitations

The study had some limitations due to the risk of sample bias. The sample was overwhelmingly White (88%) and female (82%). However, the nursing profession traditionally lacks diversity. Additionally, the sample size was primarily from the millennial generation and had registered nurses (RN) licenses (89%) with BSN degrees. On average, the American nurse is an RN with a BSN degree (a little over 50%) but precedes the millennial generation in age (U.S. Bureau of Labor Statistics, 2019a). The study had other potential biases due to the participant recruitment method. Participant recruitment was done through multiple social media platforms. However, a large portion of the respondents was from the social media site Reddit. Reddit is considered a more liberal-leaning platform and the sample had a large majority of liberal-leaning participants, at 62%. Further, the study's findings revealed a significant correlation between higher IAIS scores, the intellectual category, and political party affiliations.

The selected methods for analysis have a risk for potential limitations in the study. Simply determining the frequency of anti-intellectualism among a group of nurses is meaningful, but it does not provide a large amount of insight when anti-intellectual levels are unknown to the general population or even other healthcare workers. A correlation

analysis does not consider cause and effect, but only relationships (Gray et al., 2017). Therefore, leaving room for inappropriate assumptions. Additionally, Spearman's correlation is less sensitive than another other bivariate correlational analyses, and a logistic regression assumes that the independent variable and the dependent variables are linearly related though they may not be (Gray et al., 2017).

In addition to limitations, the study has a delimitation. The study did not ask participants about their COVID-19 vaccination status despite using COVID-19 vaccinations as an identified problem for this research. COVID-19 vaccinations have become a controversial topic. Questions regarding COVID-19 vaccinations were purposely omitted from the research questionnaire for fear of losing participation and potentially causing conscious or unconscious, internal biases. Ultimately, this research's purpose was not to determine anti-intellectualism as it relates to vaccination rates.

Recommendations for Practice and Education

This study found anti-intellectualism among a group of working nurses. The existence of anti-intellectualism can influence a nurse's practice. However, the research indicates anti-intellectualism is a possible product of nursing education, not nursing practice. Therefore, the recommendation from this research focuses on nursing education as it disseminates into nursing practice.

Anti-intellectualism had limited variation between licensure types and nursing educational levels, except for doctoral degrees. The findings call for a change in nursing education, specifically pre-licensure curriculums, for it is the gate into the profession. The recommendation, based on the finding of this study, would be for nursing education to take a step back from its heavily practical approach. Nursing education needs to have a

better balance between teaching nurses how to critically think, write, and use philosophy, as well as to perform a skill set, especially for degrees obtained within academia.

The answer is not to completely swing the pendulum away from a practical education to a theoretical one. Making nursing theory more robust can potentially lead to more anti-intellectualism. Academic rigor is shallow in nursing theory and meta paradigms, which have their faults, and are not necessarily relevant to solving anti-intellectualism as they are typically only available to a select few. Concepts like the metaparadigm and epistemology are utterly foreign to the average nurse, no matter how rigorously academia debates them. Only a select few nurses pursue academia and are actively engaged with nursing theory. Therefore, efforts to curb anti-intellectualism through the cultivation of nursing theory will, realistically, only tangibly affect those who already engage at the top tears of nursing academia. Isolating focus on the cultivation of nursing theory would likely entrench existing anti-elitist ideals, as addressed in the literature review (Racine & Vandenberg, 2021). Indeed, this singular focus would lead nursing theory to become more complicated and inaccessible to mainline nurses. In turn, those who do not participate in the discussion are afforded a different path, which off-handedly dismisses theory altogether, thus inviting even more anti-intellectualism in the profession.

One potential solution is to require nurses to complete an additional degree or a pre-nursing degree. The findings support a pre-nursing degree, in that those nurses who had additional non-nursing degrees were found to be less anti-intellectual. However, altering pre-licensure curriculums presents its own problem in that these changes run the risk of metamorphizing the profession away from what it is. The nursing profession is

good, and the educational system works, though anti-intellectualism remains a problem that needs to be fixed.

Ultimately, completely "fixing" nursing education has its own potential problems; however, the educational system should support and foster a value for intellectual development and intellectuals, not neglect or even outright discourage it. This study indicates that the entire nursing educational system needs a reassessment. We may not have all the tools to fix anti-intellectualism within nursing education, because anti-intellectualism must, fundamentally, be addressed on a societal level. However, the nursing profession needs to have an open discussion about anti-intellectualism, and its effects, to take a step forward in battling this problem.

Recommendations for Research

Simply put, more research is needed on anti-intellectualism, both from a nursing and generalized perspective. Anti-intellectualism was found among a group of practicing nurses, but how that compares to the general population is unknown, especially from an empirical perspective. Additionally, this research needs to be replicated to have a more diverse sample and to verify the validity and reliability of this study. Further, the findings from this research suggest a gap in knowledge regarding the expression of anti-intellectualism within nursing education. Anti-intellectualism within nursing education needs further investigation, both theoretically and empirically.

Conclusion

Anti-intellectualism is the lack of value for intellectual pursuits and those who pursue intellect. The anti-intellectual tendency is spread through the educational system by the influence of anti-rationalism, anti-elitism, and practicality (Hofstadter, 1963;

Rigney, 1991). The outcomes of this study reinforce Hofstadter's (1963) work regarding anti-intellectualism, as the study found correlations to anti-rationalism, via religion, anti-elitism, via political affiliations, and practicality through nursing education. The study found anti-intellectualism exists among a group of working nurses. Nurses who have anti-intellectual tendencies can limit the intellectual growth of the profession, as anti-intellectualism is the adversary of intellectual development. The next step is to further investigate anti-intellectualism and take measures to change it.

APPENDIX A – Intellectualism-Anti-Intellectualism Scale (IAIS)

- Working on difficult intellectual problems is enjoyable and stimulating for me.

  1 = completely false, 2 = somewhat false, 3 = neither true or false, 4 = somewhat true, 5 = completely true
- I generally find physical or recreational activities more satisfying than intellectual activities. (R)

  1 = completely true, 2 = somewhat true, 3 = neither true or false, 4 = somewhat false, 5 = completely false
- I tend to feel somewhat bored and impatient when dealing with remote, theoretical problems. (R)

  1 = completely true, 2 = somewhat true, 3 = neither true or false, 4 = somewhat false, 5 = completely false
- Intellectual discovery is ok, but I prefer other forms of excitement. (R)

  1 = completely true, 2 = somewhat true, 3 = neither true or false, 4 = somewhat false, 5 = completely false
- I′m probably the sort of person who would find it thrilling to be engrossed in a research project.

  1 = completely false, 2 = somewhat false, 3 = neither true or false, 4 = somewhat true, 5 = completely true
- I deliberately seek out sources of intellectual stimulation.

  1 = completely false, 2 = somewhat false, 3 = neither true or false, 4 = somewhat true, 5 = completely true
- I have more exciting things to do than sit around and think all day long. (R)

1 = completely true, 2 = somewhat true, 3 = neither true or false, 4 = somewhat false, 5 = completely false

- I feel compelled to work on conceptual problems, even when I don't have to.

  1 = completely false, 2 = somewhat false, 3 = neither true or false, 4 = somewhat true, 5 = completely true
- One of my favorite activities is discovering alternative ways of explaining a particular phenomenon.

  1 = completely false, 2 = somewhat false, 3 = neither true or false, 4 = somewhat true, 5 = completely true
- The process of examining a concept in great detail is generally unappealing to me (R)

  1 = completely true, 2 = somewhat true, 3 = neither true nor false, 4 = somewhat false, 5 = completely false (Marques et al., 2017).

APPENDIX B – Demographic Questionnaire

- What is your age?
  - 18-24
  - 25-34
  - 35-44
  - 45-54
  - 55-64
  - 65-74

- What is your gender identity?
  - Male
  - Female
  - Transgender
  - Non-binary
  - Other
  - Prefer not to answer

- Are you of Hispanic, Latino, or Spanish origin? Yes/No

- How would you describe yourself (ethnicity)?
  - White or Caucasian
  - Black or African American
  - American Indian or Alaskan Native
  - Asian
  - Native Hawaiian or pacific islander
  - Multiple ethnicities

- What is your marital status?
  - Single (never married)
  - Married or in a domestic partnership
  - Widowed
  - Divorced
  - Separated

- What is the number of people in your household?

- Please indicate the current (highest) nursing licensure you hold:
  - PN/LPN/LVN
  - RN
  - APRN

- What is the highest degree or level of school you have completed?

- Practical nursing certification
- Diploma in nursing science
- Associate Degree in Nursing
- Bachelor's Degree in Nursing
- Master's Degree in Nursing – nurse practitioner or nurse anesthesia
- Master's Degree in Nursing
- Doctor of Nursing Practice or Nurse Anesthesia
- Doctor of Philosophy in Nursing
- Doctor of Nursing Science

- Are you currently enrolled in school? Yes/No

- Do you plan to enroll in nursing school in the next 6 months? Yes/No

- What type of degree program are you enrolled in?
  - RN to BSN
  - MSN
  - MSN – NP
  - RN to MSN
  - RN to DNP
  - LPN to RN (Associates degrees)
  - LPN to RN (bachelor's degrees)
  - DNP/DNAP
  - PhD
  - Post-master's certification

- Do you have another degree? Yes/No
  - Yes - please list the degree.

- What is your current employment status?
  - Full-time employment (36 hours or more)
  - Part-time employment (24 to 35 hours)
  - PRN or Per diem (less than 24 hours)
  - Retired
  - Student
  - Self-employed
  - Homemaker
  - Unemployed looking for work
  - Unemployed not looking for work
  - Unable to work

- Please list your nursing specialties and areas of practice.

- Do you have any nursing certifications? Yes/No
  - If yes, please list.

- What is your primary source of information for keeping up with health care trends, including trends that affect your practice?
  - My employer
  - Mainstream media, including tv, radio, and newspaper
  - Social media
  - Professional associations, like the American Nurses Association
  - Governmental agencies
  - My professional peers
  - Friends, family, or other informal networks
  - Experts in the field
  - Other

- Do you have more than one job as a nurse? Yes/No
  - Yes - How many and what is the employment status?

- Are you a travel nurse?

- Do you have insurance through your job?

- Was your personal income the last year you worked as a nurse influenced by COVID-19-related rates or per diems? Yes/No

- What is your total household income (including you and your partner, if applicable)?
  - $10,000 to 19,999
  - $20,000 to 29,999
  - $30,000 to 39,999
  - $40,000 to 49,999
  - $50,000 to 59,999
  - $60,000 to 69,999
  - $70,000 to 79,999
  - $80,000 to 89,999
  - $90,000 to 99,999
  - $100,000 to 149,999
  - $150,000 or $ 199,999
  - $ 200,000 or more

- Are you considering leaving the workforce? Yes/no
  - Yes – Please explain.

- Have you recently left the workforce? Yes/No

- What U. S. state or territory do you currently live in (if no longer a resident of the U.S., please indicate your current location)?
  - Outside of the U. S. state, do you currently work in the U.S.? Yes/No

- Do you currently work in the same location where you live? Yes/No
  - No-what U. S. state or territory do you currently work in?

- What type of community do you live in?
  - Rural area
  - Small city or town
  - Large city
  - Suburb near a large city

- Are you actively involved within your community? Yes/No
  - If yes:
    - Not involved
    - Slightly involved
    - Moderately involved
    - Very involved

- To what level, do you consider yourself to be religious?
  - Not religious
  - Slightly religious
  - Moderately religious
  - Very religious
  - Don't know

- Select the political ideology you identify with the most:
  - Conservative
  - Moderate
  - Liberal

- Are you registered to vote? Yes/No

- Did you vote in the last presidential election? Yes/No

- If registered to vote, what party are you affiliated with?
  - Republican
  - Libertarian
  - Green party
  - Constitutional party
  - Democratic

    - Independent
    - No party affiliation

- To what level, do you consider yourself to be religious?
    - Not religious
    - Slightly religious
    - Moderately religious
    - Very religious
    - Don’t know

- What religious family do you belong to or identify yourself most close to?
    - Asian Folk Religion
    - Hindu
    - Judaism
    - Islam
    - Christianity (Catholic, protestant, or any other Christian denominations)
    - Other
    - I am not religious (please specify)

- If Christian, what specific denominations do you practice?
    - Baptist
    - Pentecostal
    - Methodist
    - Evangelical
    - Catholic
    - Presbyterian
    - Episcopalian
    - Lutheran
    - Anglican
    - Non- denominations

APPENDIX C – IRB Approval Letter

Office *of*
Research Integrity

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

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NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

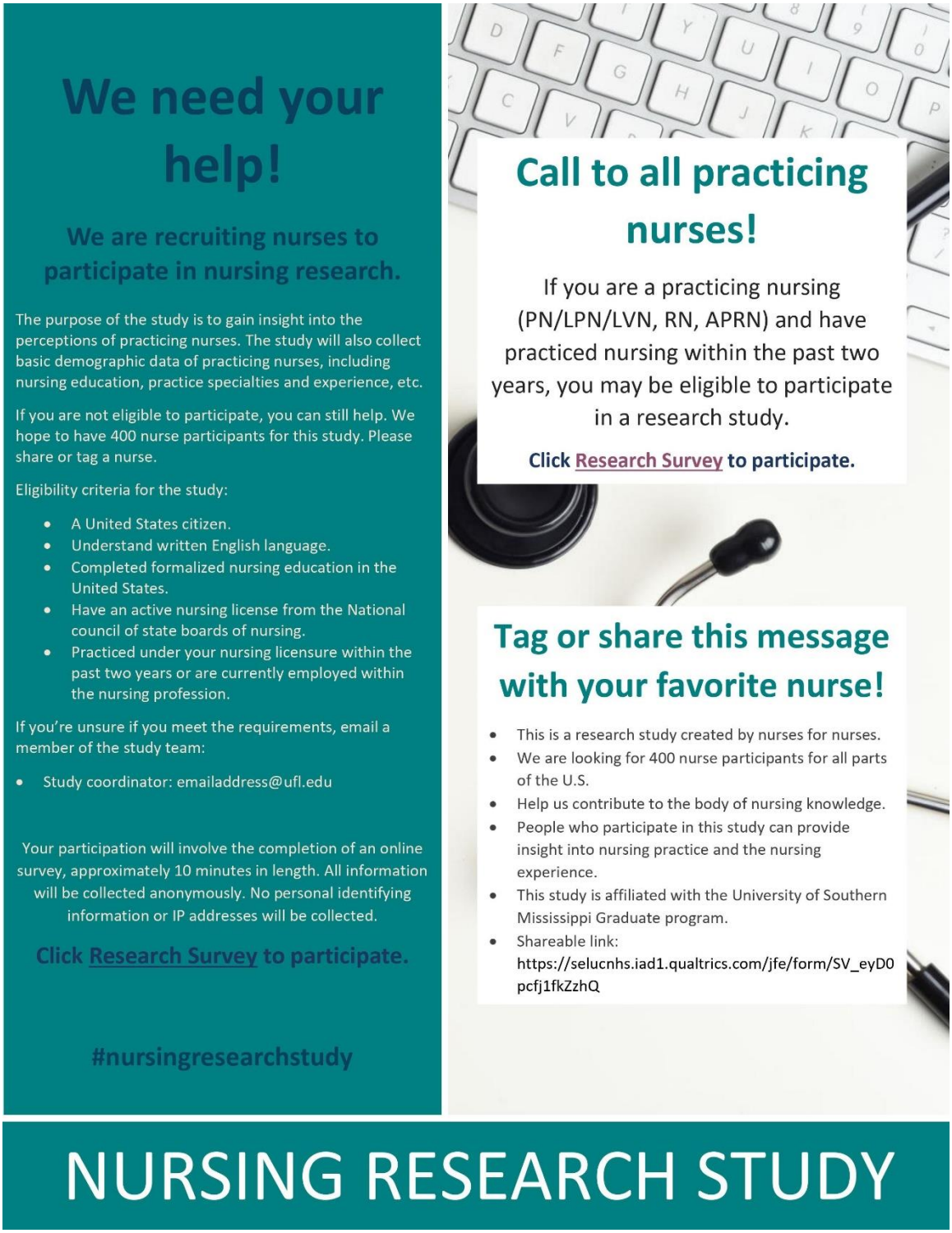
The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident submission on InfoEd IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.

PROTOCOL NUMBER:	21-355
PROJECT TITLE:	Are Nurses anti-intellectual? An Investigation of Anti-intellectualism among American Nurses.
SCHOOL/PROGRAM	School of Leadership & Advance Nursing Practice
RESEARCHERS:	PI: Jamie Davis-Tubbs Investigators: Davis-Tubbs, Jamie~Story, Jennifer~
IRB COMMITTEE ACTION:	Approved
CATEGORY:	Expedited Category
PERIOD OF APPROVAL:	08-Feb-2022 to 07-Feb-2023

Donald Sacco, Ph.D.
Institutional Review Board Chairperson

APPENDIX D – Recruitment Flyer

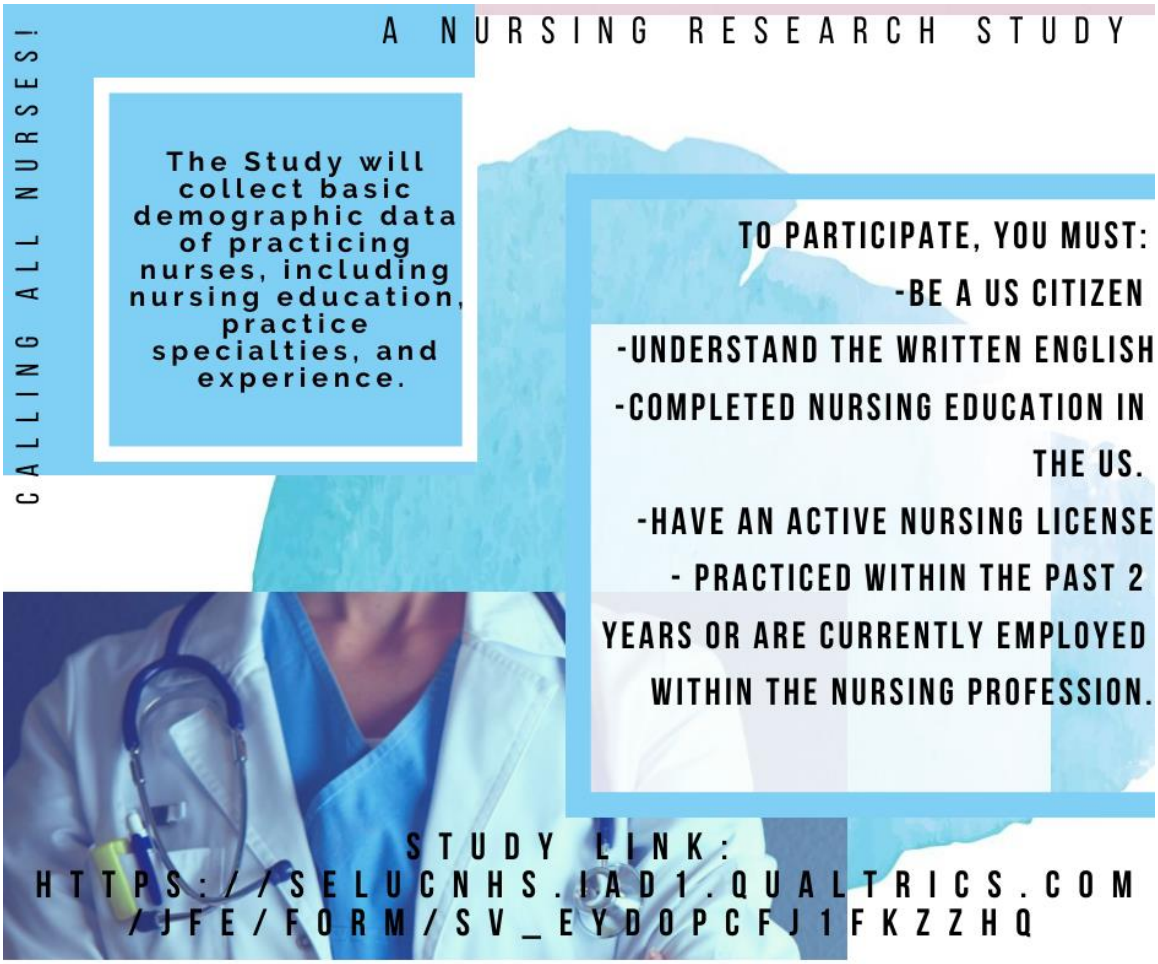


(Clip art of keyboard and stethoscope, n. d.)

APPENDIX E – Modified Recruitment Flyer for Instagram and Twitter

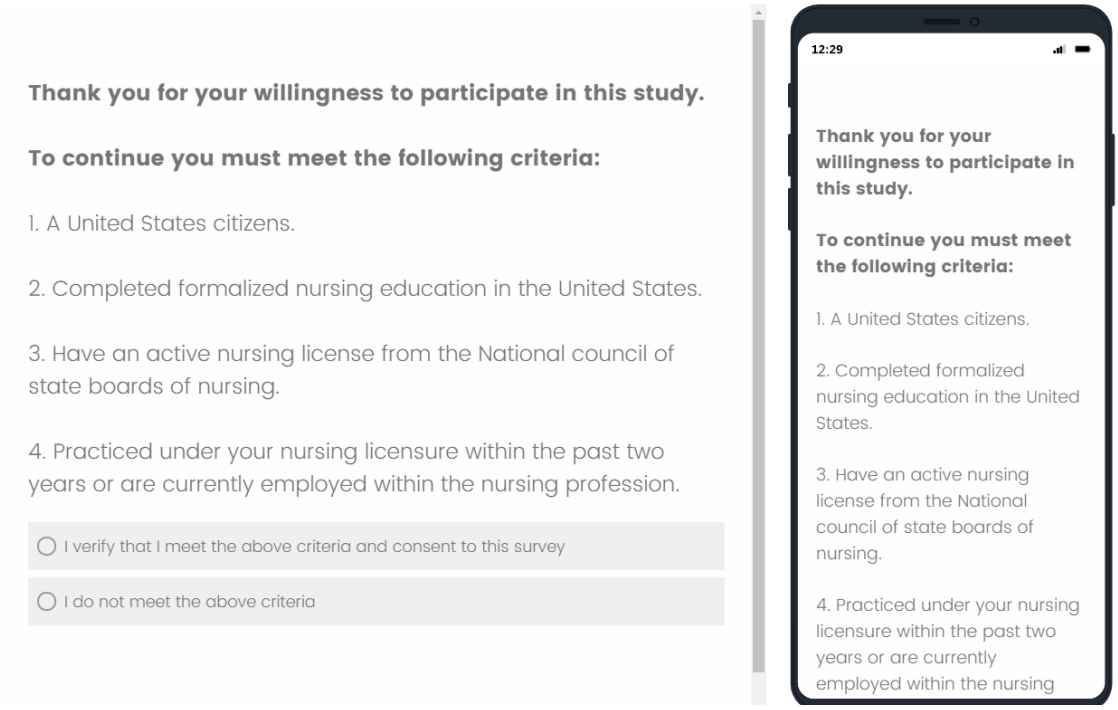
(Vistacreate, 2022b)

APPENDIX F – Additional Modified Recruitment Flyer for Facebook and LinkedIn



(Vistacreate, 2022a)

APPENDIX G – Image of Inclusion Criteria from Qualtrics Survey

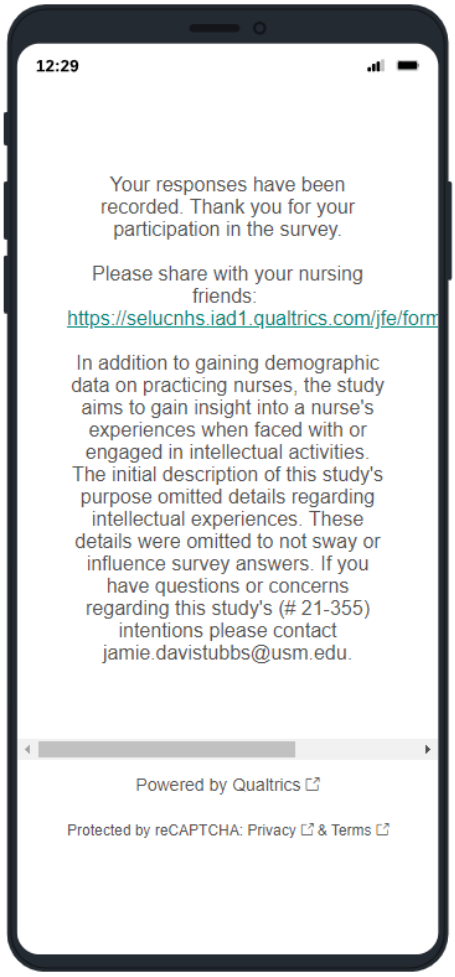


APPENDIX H – Informed of True Research Intentions (Image from Qualtrics Survey)

Your responses have been recorded. Thank you for your participation in the survey.

Please share with your nursing friends:
https://selucnhs.iad1.qualtrics.com/jfe/form/SV_eyD0pcfj1fkZzhQ

In addition to gaining demographic data on practicing nurses, the study aims to gain insight into a nurse's experiences when faced with or engaged in intellectual activities. The initial description of this study's purpose omitted details regarding intellectual experiences. These details were omitted to not sway or influence survey answers. If you have questions or concerns regarding this study's (# 21-355) intentions please contact jamie.davistubbs@usm.edu.



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