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Barriers to Male Faculty in Nursing Education

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This is to certify that the doctoral study by

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Abstract

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MSN, University of Texas at El Paso, 2008

BSN, Austin Peay State University, 1997

Dissertation Submitted in Partial Fulfillment

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Abstract

Men are underrepresented among nursing faculty, providing few role models for male students who might benefit from interaction with male faculty. Male nursing faculty may face barriers similar to those faced by women in male-dominated professions. Diehl and Dzubinski's model of gender-based barriers served as the framework for this quantitative study conducted to identify disparities between male and female nursing faculty that may prevent men from entering, continuing, and advancing in nursing education. The association between the percentage of male nursing faculty with geographic region; institution type (i.e., public, private secular, or private religious); and 4 career variables (i.e., education level, rank, tenure, and administrative position) were investigated in this study. Data were obtained from 20,953 faculty from the American Association of Colleges of Nursing 2017 Annual Survey of Baccalaureate and Graduate Nursing Programs. Chi square analyses indicated significant associations between the percentage of male nursing faculty with both the 4 geographic regions and with institution type as well as with several career variables. Post hoc tests revealed a lower percentage of male nursing faculty in religious institutions in the North Atlantic region; significant associations between the percentage of male nursing faculty and faculty education level, specifically in public institutions in the South and private secular institutions in the West; academic rank in public institutions in the South and West; and tenure status in private secular institutions in the North Atlantic and in public institutions in the South and West. Uncovering these discrepancies could lead to an increase in male nursing faculty which, in turn, would provide more role models for male students and may aid in attenuating the shortage of nurses.

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Chapter 1: Introduction to the Study

More male faculty members are needed to both add diversity to nursing education (Brody et al., 2017) and to provide mentors and role models for male nursing students (Juliff, Russell, & Bulsara, 2016). Barriers to male nursing faculty have been described anecdotally, but I found no recent studies to quantify these barriers. By analyzing archival survey data, I investigated barriers to male nursing faculty at the societal and organizational levels by exploring proportional differences in male faculty by geographic region and institutional control type (i.e., public, private secular, or private religious). This research was needed to better understand, and thereby possibly attenuate, the barriers to men in nursing and nursing education. Decreasing barriers will allow more males to enter the workforce and benefit society by reducing or eliminating the nursing shortage.

This chapter will include a brief presentation of the background literature, which will be expounded on in the next chapter. This first chapter will also include the problem statement, the purpose of the study, and two research questions with their associated hypotheses. I will discuss a theoretical framework found in human resources literature that categorizes barriers to females and was adapted for use in this study. The nature of the study will be described, followed by operational definitions, assumptions, scope and delimitations, limitations, and the significance of the study.

Background

The barriers that exist for males in nursing education can be found at societal, organizational, and individual levels similar to those described by Diehl and Dzubinski

(2016) in their study of barriers for women in male-dominated professions. Stereotypes that most male nurses are gay (Juliff et al., 2016; Stanley et al., 2016) or that many are sexual predators (Crossan & Mathew, 2013; Stanley et al., 2016) have been documented in recent literature. Additionally, male nursing students struggle with discrimination in grading (Kiekkas et al., 2016); higher attrition rates (Chan, Chan, Lui et al., 2014); marginalization (Juliff et al., 2016); feminized curriculums (Jordal & Heggen, 2015; Solbraekke, Solvoll, & Heggen, 2013); tokenism (Kaiser Family Foundation [KFF], 2017; MacWilliams, Schmidt, & Bleich, 2013); discrimination during clinical placement; and workplace harassment during clinical training in medical treatment facilities (Anthony, Yastik, MacDonald, & Marshall, 2014; Tecza et al., 2015).

Male students both appreciate and feel that they benefit from male faculty in their programs (Juliff, Russell, & Bulsara, 2015). Recruiting, developing, and retaining more male nursing faculty will require attenuating the barriers that prevent or unduly challenge males in nursing education, practice, and academia. Barriers to all, but particularly junior, nursing faculty regardless of gender include territorialism, departmental power struggles, perceptions that the senior faculty want to see the junior faculty fail, perceptions that senior faculty feel threatened by junior faculty, rejection, self-doubt, fear of reprisal, and belittlement (Peters, 2014) as well as workplace harassment (Clark, Olender, Kenski, & Cardoni, 2013). Barriers to males as nursing faculty include biased recruiting (Evans, 2013), lack of mentoring, lack of support, tokenism, and communication style constraints (Brody et al., 2017).

Although multiple studies have reported the difficulties that male nursing students face in nursing school, the scarcity of male nursing faculty is a gap in practice about which there is much to learn. Identifying barriers to male nursing faculty to improve their experience and that of male nursing students, possibly leading to increased male representation in academia and the profession, was the impetus for conducting this study.

Problem Statement

According to the American Association of Colleges of Nursing (AACN; 2017c), the aging baby boomer population and their health care needs have resulted in a shortage of nurses that is expected to continue despite increased enrollment in baccalaureate nursing programs. Males, who are essentially half of the population, yet account for only 8% of nurses (KFF, 2017), remain a largely untapped source of future nurses to help alleviate the shortage. Studies have indicated that this discrepancy is primarily because society still views nursing as a female profession that is inappropriate for males (Juliff et al., 2016; Stanley et al., 2016).

Once a man decides to pursue nursing, he may find it difficult to navigate feminine curricula (Jordal & Heggen, 2015; Solbraekke et al., 2013) or find acceptance in female-dominated clinical environments (Schmidt, 2016). Male nursing students struggle with a lack of mentors and role models (Juliff et al., 2015) and may even encounter overt discrimination and hostility (Anthony et al., 2014; Tecza et al., 2015). Male nursing faculty are needed to provide role models and mentors for male nursing students and ensure a gender-neutral learning environment.

The AACN (2017d) identified a lack of qualified nursing faculty as a significant limitation on the nation's ability to educate enough nurses to combat the aforementioned shortage; yet, only 5.4% of nursing faculty are men (AACN, 2017e). The director of the Center for Diversity and Global Initiatives for the National League for Nursing recognized that the organization has been "limited in how nursing education recruits, retains, and advances the careers of men in nursing," yet no one in the National League of Nursing is currently researching the topic (V. Adams, personal communication, February 22, 2016). Although studies of incivility among nurse educators (e.g., Clark et al., 2013; Del Prato, 2013) and barriers to junior nurse faculty (e.g., Peters, 2014) can be readily found in the literature, I only found one study specifically addressing the barriers faced by male nursing faculty (i.e., Brody et al., 2017) and barriers in that study were reported only anecdotally within the context of leadership development. The leading expert on incivility in nursing and nursing education noted that she knows of no studies concerning gender differences and nursing faculty (C. Clark, personal communication, February 18, 2016).

Purpose of the Study

The purpose of this quantitative study was to identify disparities that may exist between proportions of male and female nursing faculty within geographic regions and institutional types (i.e., public, private secular, and private religious) to determine the barriers that may prevent men from entering, continuing, and advancing in nursing education. Additionally, I explored associations between these variables with the

instructor career status variables of educational level, rank, tenure, and administrative position[1].

Research Questions and Hypotheses

In this study, I addressed the association between three nominal variables—gender, region, and institution type—and five ordinal career status variables of nursing faculty. Institutions of higher education were categorized into four geographic regions (North Atlantic, Midwest, South, or West) and three types (public, private secular, or private religious) for all analyses. I considered the total number of faculty by gender (male or female) in Research Question 1 (RQ1). In RQ2, I considered four ordinal instructor career status variables: education level, rank, tenure, and administrative position.

RQ1: What is the association between gender and region and/or institution type for nursing faculty?

$H_0$1: There is no association between gender and region and/or institution type for nursing faculty.

H_a1: There is a significant association between gender and region and/or institution type for nursing faculty.

RQ2: What is the association between gender and region and/or institution type with each of the following characteristics of nursing faculty: (a) education level, (b) rank, (c) tenure, and (d) administrative position?

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[1] The original variables administrative responsibility and administrative title were combined, for reasons that I will explain in the Retrieval and Recoding section of Chapter 4, to form a new variable, administrative position.

$H_0$2: There is no association between gender and region and/or institution type with each of the following characteristics of nursing faculty: (a) education level, (b) rank, (c) tenure, and (d) administrative position.

H_a2: There is a significant association between gender and region and/or institution type with one or more of the following characteristics of nursing faculty: (a) education level, (b) rank, (c) tenure, and (d) administrative position.

Theoretical Framework

I did not find any frameworks in the current literature that addressed male faculty in female-dominated disciplines. After reviewing multiple feminist frameworks, I selected one that seemed appropriate for this study. Diehl and Dzubinski (2016) studied hidden sexism as a barrier to females in leadership positions in institutions of higher education and religious organizations. Building on critical human resource development theory, the authors identified, classified, and defined 27 barriers according to the levels of society at which they occur.

Diehl and Dzubinski (2016) recommended that "future research should be undertaken with male leaders to discover how barriers impact men and to compare experiences of male and female leaders" (p. 202). These same or similar barriers may exist for males in nursing education. In this study, I identified potential barriers at the societal and organizational levels as described by Diehl and Dzubinski, whose model, as well as how it relates to this study, will be further explained in Chapter 2.

Nature of the Study

In this study, I employed a quantitative, nonexperimental design with chi square analyses of archival survey data. This type of design is appropriate when quantitative data are available that have not been fully explored (Creswell, 2012). Data obtained by the AACN (2017a) through their Annual Survey of Baccalaureate and Graduate Nursing Programs (ASBGN) were analyzed using six different chi square analyses. According to Polit and Beck (2014), a chi square analysis is used to determine whether there is an association between categorical variables.

Definitions

Macrobarrier: A gender barrier that exists primarily at the societal level (Diehl & Dzubinski, 2016).

Mesobarrier: A gender barrier that exists primarily at the group or organizational level (Diehl & Dzubinski, 2016).

Microbarrier: A gender barrier that exists primarily at the individual level (Diehl & Dzubinski, 2016).

Assumptions

An assumption is "a basic principle that is accepted as being true based on logic or reason, but without proof or verification" (Polit & Beck, 2004, p. 711). For this study, I assumed that male and female nursing faculty have the same goals to do well and to be successful in their profession and that these are similar in all regions of the country and types of institutions. Therefore, although the numbers may be different, the percentage of male nurses who want to work and advance in nursing academia should be equivalent to

the percentage of female nurses with the same desire. I also assumed these desires to be equivalent between the genders in the different regions and types of schools and that any difference in percentages of male and female faculty between regions and types is related to barriers, not a lack of males willing and qualified to work in academia. The accuracy of the archival data set was assumed because there was no mechanism for verifying the data in this set. With the decision to combine administrative responsibility and administrative title to form the new variable administrative position (see Footnote 1), I made the additional assumption that any faculty with less than 50% administrative responsibility did not hold an administrative position.

Scope and Delimitations

The purpose of this quantitative study was to identify disparities that may exist between the proportions of male and female nursing faculty within geographic regions and institutional types in an attempt to detect barriers that may prevent men from entering, continuing, and advancing in nursing education. The scope of this study concerning male faculty included full-time faculty teaching in baccalaureate, masters, and doctoral nursing programs. The data for the study were submitted voluntarily to the AACN by member and nonmember schools. Because only faculty teaching in baccalaureate, masters, and doctoral nursing programs were included in the study, the results of the study may not be generalizable to faculty from other types of nursing programs, such as vocational nursing or associates degree programs.

Limitations

The use of archival data presented several limitations. Because the data collected show a snapshot in time, unrealized historic influences could have also posed a threat. The aggregate data did not support more robust statistical testing that might have been possible with data from individual institutions. Data from individual institutions were available from the AACN, and were considered as an option, but multiple difficulties arose, particularly concerning the confidentiality of data indicating faculty rank, which precluded analysis of small groups such as would be found for male faculty at individual institutions. The inclusion of all member schools that participated in the survey and faculty rank as a variable seemed more consistent with the purpose of the study despite the statistical limitations.

Internal validity refers to whether variability in the dependent variables can be accounted for by the independent variables or if this variability is the result of unknown variables or random variation (Polit & Beck, 2004). As is the usual case when using survey data with no manipulation of variables, cause and effect relationships could not be established (see Polit & Beck, 2004). The data were reported to the AACN by individual nursing schools and no mechanism was available to validate these data. Concerning threats to external validity, the results may not be generalizable to faculty in vocational nursing programs, associates degree programs, or diploma programs. The use of archival data eliminates the effect of researcher bias on data collection; nevertheless, subtle biases may have influenced the study design, analyses of data, or interpretation of results. I analyzed the data statistically with little opportunity for bias to influence the results. The

interpretation of the results was the step with the greatest potential for bias; however, I made interpretations with respect to findings already in the literature and not speculation.

Significance

Previous research on barriers to men in nursing education was largely limited to the student experience. As previously mentioned, studies have shown that male nursing students struggle with a lack of mentors and role models (Juliff et al., 2015) in a female-oriented educational environment (Anthony et al., 2014; Chan, Chan, Lui et al., 2014; Jordal & Heggen, 2015; Juliff et al., 2016; Kiekkas et al., 2016; MacWilliams et al., 2013; Solbraekke et al., 2013; Tecza et al., 2015).

This study is an original contribution to the literature concerning gender disparities of faculty in nursing education. A better understanding of this problem may help to identify and attenuate barriers to male faculty members in nursing education, leading to positive social change by providing more male mentors and role models for nursing students and decreasing female bias in nursing curricula. The results of this study will be available to the AACN and nursing education leaders who may then use the information to make better decisions concerning the recruitment, retention, and mentoring of male nursing faculty. Finally, the information will inform current and potential male nursing faculty members so that they may make wiser career decisions for the enhancement of their own lives and for the furtherance of their profession.

Summary

Although little research has been published regarding males as nursing faculty, studies on nursing students have shown a number of barriers preventing males from

choosing nursing as a career and acquiring an education in the field. Once licensed, the same societal barriers and a reciprocal set of organizational barriers continue to affect males in the nursing profession (Anthony et al., 2014; Juliff et al., 2015; Schmidt, 2016; Tecza et al., 2015). Available research indicates that, in the realm of nursing academia, men struggle (Brody et al., 2017; Juliff et al., 2016; MacWilliams et al., 2013). In the next chapter, I will further illuminate the barriers to males in nursing and nursing education as described in the extant literature.

Chapter 2: Literature Review

More male faculty members are needed in nursing education (Julif et al., 2015; Mott & Lee, 2018), but barriers to men in the profession have been reported in the literature including stereotypes (Crossan & Mathew, 2013; Juliff et al., 2016; Stanley et al., 2016); discrimination (Anthony et al., 2014; Kiekkas et al., 2016; Tecza et al., 2015); higher attrition rates (Chan, Chan, Lui et al., 2014); marginalization (Juliff et al., 2016); feminized curriculums (Jordal & Heggen, 2015; Solbraekke et al., 2013); and tokenism (KFF, 2017; MacWilliams et al., 2013). The purpose of this quantitative study was to identify disparities that may exist between the proportions of male and female nursing faculty within geographic regions and institutional types in an attempt to detect barriers that may prevent men from entering, continuing, and advancing in nursing education.

This chapter will include a detailed account of the search strategy that I used to find current literature. The synopsis of the theoretic framework will provide a structure for my presentation of the literature. Due to the dearth of literature related directly to the problem of barriers to men as nursing faculty, I will present studies related to male nurses and nursing students first, organized by levels consistent with the theoretical framework. A discussion of studies related to faculty barriers will follow.

Literature Search Strategy

I used the Cumulative Index to Nursing & Allied Health Literature (CINAHL) Plus with Full Text database to search published articles that addressed men in nursing and nursing education. The terms (*male* OR *men* OR *gender* OR *sexism*) AND (*nurse* OR *nursing*) were searched in titles published in English between 2013 and 2017, yielding

587 results. Duplicates and irrelevant results were removed, leaving 32 results. I included articles from Western cultures if they were scholarly and concerned societal, organizational, or microbarriers to men in nursing or nursing education. Articles relating to advanced practice and specialty fields were reviewed, but generally excluded, because most were either opinion papers or dealt specifically with variables related only to their respective areas.

I searched the same terms in the subject fields for the same date range with the limiter of articles written in English. The additional limiter of NOT *female* was necessary to eliminate a plethora of gender-nonspecific articles that included *male:female* in their subject fields. This search yielded 1,234 results. Duplicate and irrelevant search results were removed using the same inclusion criteria, leaving one relevant article that was not included in the previous search.

The search terms *incivility AND nursing*, limited only to the previously mentioned date range and the limiter *research article*, produced 24 results, of which six were relevant. The search terms *touch* OR *care* AND (*intimate* OR *appropriate*) AND *male* AND *nurse*, limited only to the previously mentioned date range and the limiters *full text* and *English language*, produced 212 results, of which one new article was relevant. The search terms *nursing student* AND *attrition*, with the same limiters, yielded 142 results, of which two were new and relevant.

I included additional sources that emerged throughout the research process. The literature search was updated in October 2018. The original search terms and conditions were applied, and only four new articles were found to be scholarly, unique, and relevant.

Theoretical Foundation

I first explored the broader context of theories related to this study, which uncovered a rich history of feminist human resource development theory. In a critique of traditional human resource development theory, Bierema (2009) traced the feminist influence on human resources to the large number of women who worked in personnel administration in the middle of the last century (see Miller & Coghill, 1964). Bierema described human resource development dominated by White males and focused on productivity to the neglect of more humanistic values such as social justice and equity, while critical human resource development offers feminist solutions. The human resource development literature includes five processes by which organizations are gendered: divisions, symbolism, interactions, identity, and social structures (Acker, 1990).

Building on critical human resource development theory, Diehl and Dzubinski (2016) classified and defined 27 barriers faced by women in higher education and religious organizations according to the multiple levels at which they predominately operate. With no frameworks available concerning male faculty in female-dominated disciplines, I selected Diehl and Dubinsky's work because it provided a logical hierarchy of largely gender-based barriers that operate within and between different societal levels. Additionally, the framework was particularly appropriate for this study because it was developed from two studies, one in the context of higher education and the other in the context of religious organizations. Diehl conducted interviews in the context of higher education leadership. Although the gender roles were reversed in the present study, the context seemed otherwise analogous. Dzubinski conducted interviews in the context of

higher leadership in religious organizations. Together, the authors concluded that the magnitude of the observed barriers was generally much greater in the religious organizations, likely due to pressure on women to conform to stereotypes.

Diehl and Dzubinski (2016) conceptualized the identified barriers into the three societal levels. The authors found six *macrobarriers* that operate in the broader society as opposed to 16 *mesobarriers* that operate at the organizational and group levels. Lastly, the authors identified five *microbarriers* that affect individuals and their interaction with others. Their model illustrates how barriers found at lower levels operate within the context of the higher structure. Diehl and Dzubinski also proposed that barriers typical of a higher level may operate at a lower level. They gave the example of stereotyping, which they place at the overall societal level but assert can be found operating at the organizational or individual levels as well.

Using this framework, Diehl, Stephenson, and Dzubinski (2018) developed their Scale for Unconscious Bias Towards Women Leaders (SUBTLE). Although in this study, they also included female education executives and female leaders in religious organizations, the authors enhanced the generalizability of their model by including female physicians as well. The findings of their study supported 15 of the 27 barriers included in the original model. Diehl and Dzubinski's (2016) work was also included in a review of current literature pertaining to gender and management by Madsen and Scribner (2017).

Researchers continue to study gendered organizations and how males and females operate differently within them. Laud and Johnson (2013) interviewed 187 leaders in 136

organizations to explore how women select and use career tactics differently than men. Participants from both genders in their mixed methods study placed similar value on many of the 15 skills identified in the analysis. Women, however, placed more value on training and education, networking, and luck, while men placed more value on leadership style and confidence (Laud & Johnson, 2013).

The hierarchical framework developed by Diehl and Dzubinski (2016) related to the present study in that both societal-level and organizational-level barriers have been found in the literature related to men in nursing and, therefore, provided the structure for the literature review. Additionally, these two levels of barriers, macro or societal and meso or organizational, were reflected in the institutional-level variables included in the research questions and data analyses.

Literature Review Related to Key Concepts and Variables

Diehl and Dzubinski's (2016) model provided me with a means of organizing the current literature concerning barriers to males in nursing education. Using the model added validity to my study by demonstrating the generalizability to a different, arguably opposite, context. The model also served as a framework to guide the design of this study and through which to interpret the results. Additionally, the framework underscored the importance of communicating the findings from this study to multiple levels of nursing education leadership.

Societal (Macro) Barriers

Of the six macrobarriers affecting women in leadership positions that were identified by Diehl and Dzubinski (2016), I found five reported in the literature regarding

men in nursing and nursing education. Researchers have found these barriers outside the United States in Australia (Juliff et al., 2016; Stanley et al., 2016); Canada (Rajacich, Kane, Williston, & Cameron, 2013); Chile (Ayala, Holqvist, Messing, & Browne, 2014); China (Chan, Chan, Yu et al., 2014), Israel (Askenazi, Livshiz-Riven, Romem, & Grinstein-Cohen, 2017); and Norway (Solbraekke et al., 2013). I found no studies comparing barriers between two or more nations.

Control of men's voices. Men in female-dominated disciplines and environments can find themselves excluded from conversations, whether as a group at the societal level or as individuals at the organizational or group level. Diehl and Dzubinski (2016) defined control of women's voices as "restrictions on when and how women contribute to the conversation" (p. 188). Polit and Beck (2012) found males largely underrepresented as participants in nursing research published in 2005–2006 and confirmed persistence of the bias in literature published in 2010–2011. According to the authors, the gender bias did not exist in studies in which the lead author was male. I found no studies indicating whether there is a publication bias for or against male authors, but even a proportionate representation of published studies with male lead authors would leave the male voice largely underrepresented in nursing literature. This lack of male voice has also been described as operating at the mesobarrier (Chan, Chan, Yu et al., 2014) and microbarrier (Brody et al., 2017) levels.

Cultural constraints on men's choices. Men may be dissuaded from entering the profession of nursing by their family, their community, or their entire culture. Diehl and Dzubinski (2016) defined cultural constraints on women's choices as "societal constraints

on women's educational and career choices" (p. 188). Chan, Chan, Yu et al. (2014) interviewed 18 male, undergraduate, Chinese nursing students leading to five emergent themes including two that were consistent with the macrobarrier of societal views affecting students' decisions to enter nursing. The researchers concluded that the decision of males to enter nursing was becoming more acceptable in China, but many believed that only female nurses should provide care to female patients.

Ayala et al. (2014) studied cultural and educational inequities for male nursing students in Chile. Using a grounded theory approach with individual and group interviews, the researchers found that societal stereotypes, family pressure, and peer pressure against men entering nursing were still profound. Once admitted, however, male nursing students enjoyed a special status and even preferential treatment from female nursing instructors and students (Ayala et al., 2014)). One way to describe this within Diehl and Dzubinski's (2016) framework is that males in Chile faced macrobarriers to entering nursing school that were greater than the mesobarriers that they encountered once they were admitted.

Gender stereotypes. Stereotypical images of nurses often conflict with the very idea of a nurse being male. Diehl and Dzubinski (2016) defined gender stereotypes as "relatively fixed and oversimplified generalizations about women" (p. 188). A recent study examined the roles of male nurses on television shows popular in the United States from 2007 to 2010 (Weaver, Ferguson, Wilbourn, & Salamonson, 2014). The researchers observed that men in nursing continued to be portrayed in manners consistent with prevailing stereotypes, including the belief that many male nurses are gay. This

stereotype seems rather universal and has been described by researchers in countries such as Australia (Juliff et al., 2016; Stanley et al., 2016); Israel (Askenazi et al., 2017); and Chile (Ayala et al., 2014). Weaver et al. (2014) further noted that even when the intent of such portrayals was to expose the effects of stereotypes, the actual effect was merely to reinforce them.

The stereotype of the male nurse as a potential predator persists even among female nursing students. Crossan and Mathew (2013) administered open-ended survey questions about providing intimate care to 166 2nd- and 3rd-year nursing students in Australia. Some female participants in their study expressed no concerns for female nurses providing intimate care to either gender yet believed that male nurses should only provide intimate care to males. Other students were concerned that male nurses might be falsely accused of improprieties (Crossan & Mathew, 2013).

To understand men's experiences and roles in nursing, Sayman (2015) interviewed 10 men who were either currently or previously employed as registered nurses in the Midwest. Participants in Sayman's study reported having been stereotyped in nursing school and being subjected daily to a multitude of feminine images of nursing. While conducting four focus group interviews with 15 currently working male nurses and one retired male nurse in Ontario, Canada, Rajacich et al. (2013) found participants in their study felt that they were frequently labeled as a *male* nurse, rather than just a nurse and that there was a lack of positive images of prominent male nurses.

Leadership perceptions. Female leaders in nursing and nursing academia may not recognize the value of the male nurses or students. Diehl and Dzubinski (2016)

recognized that if management is "associating leadership with masculinity," (p. 188) leadership perceptions can be a barrier to females in a male-dominated work environment. MacWilliams et al. (2013) systematically reviewed 49 articles written between 1996 and 2011, as well as three seminal studies and four doctoral dissertations, that discussed barriers faced by men in nursing and nursing education. The authors found two studies supporting the belief that male caring is frequently unrecognized or undervalued by nursing faculty (see Grady, 2008; Patterson, 1996). Schmidt (2016) interviewed male baccalaureate nursing students at a Midwestern university to better understand their core nursing values, particularly caring. The participants reported entering nursing school with some values consistent with the profession but gaining more throughout the educational experience. Burgos-Saelzer (2013) interviewed five male and six female nurses in Chile and similarly concluded that both genders developed a stronger sense of caring throughout their educational experience.

Using questionnaires, Penprase, Oakley, Ternes, and Driscoll (2015) compared empathy with thinking systematically, or *systemization*, between male and female nursing students and found that on the empathy scale, male nursing students scored lower than female nursing students, but higher than male students enrolled in majors not related to health care. Men consistently scored higher in systemization than women. The authors concluded that men do have a capacity for empathy consistent with nursing and recommended that recruiting efforts to attract men into nursing emphasize the opportunity to care for others, but also the opportunity to solve complex problems.

Scrutiny. Men in nursing may find their behavior, or their motivation for entering nursing scrutinized to a degree not usually experienced by female nurses. Diehl and Dzubinski (2016) characterized scrutiny as when the "intense or hypercritical examination of women" (p. 188) is not equally applied to men, this level of scrutiny can be a barrier for women. Male nurses are often stereotyped as sexual predators (Crossan & Mathew, 2013; Stanley et al., 2016). Chiarella and Adrian (2014) examined all 29 disciplinary cases related to boundary violations referred to the New South Wales Nurses and Midwives Tribunal from 1999 to 2006. The authors remarked that two thirds of the violations involved male nurses, grossly disproportionate to the 9% of nurses practicing in Australia at the time who were male. The authors concluded that many of the violations were minor and expressed concern that some violations were not likely to have been interpreted as inappropriate if the offending nurse had been female. The authors suggested that better supervision can help male nurses develop the skills and sensitivity to avoid intimate care, for example, from being misinterpreted.

Organizational (Meso) Barriers

Diehl and Dzubinski (2016) identified 16 mesobarriers, nine of which I found reported in the literature concerning male nursing students, practicing nurses, and nursing faculty. In the following subsections I summarize the evidence of these nine barriers found in the literature.

Discrimination. Men may be treated differently, not receive encouragement, and find it difficult to excel in a profession dominated by women. Diehl and Dzubinski (2016) recognized that discrimination is a barrier that includes "subtle or overt

discrimination or discouragement due to gender" (p. 189). Kiekkas et al. (2016) asked four male and four female examiners from several disciplines to grade written examinations submitted by male and female nursing students in Greece. After grading, gender identities were removed from the examinations which were then graded again. The authors concluded that there was a gender bias in favor of female nursing students.

Chan, Chan, Lui et al. (2014) conducted a systematic review of literature published between 2006 and 2011 about gender differences specifically concerning undergraduate nursing students. The authors found three studies that reported male nursing students had higher attrition rates than female students (see McLaughlin et al., 2010; Mulholland et al., 2008; Pryjmachuk et al., 2009). The difficulty that men have completing nursing programs, for whatever reasons, decreases the number of males in the nursing workforce.

Abushaikha, Mahadeen, Abdel Kader, and Nabolsi (2013) conducted interviews with 20 undergraduate baccalaureate nursing students in Jordan. The authors identified five challenges and three positive themes in the data. Although all participants were male, only one theme, discrimination, emerged that was uniquely gendered. Students reported discriminatory admission practices as well as difficulty finding clinical placements due to hospitals preferring female students.

In the first phase of a longitudinal study to determine how to retain men in the nursing profession in order to attenuate the current nursing shortage, Juliff et al. (2016) interviewed nine recently graduated male nurses in Australia. Two of the nine reported gender bias in nursing education and several reported that patients were unsure of the

male nurse's role. Another concern that emerged was marginalization of male nurses in several areas, including patient assignments, intimate touch, and the frequent presumption of homosexuality.

Exclusion from informal networks. Presumably, some degree of informal networking affords the invited persons an advantage over those who are not invited, regardless of their gender. Diehl and Dzubinski (2016) defined exclusion from informal networks as "exclusion from unofficial social events" (p. 189), though a broader definition might include socialization at formal events in the workplace itself if one or more groups is unwelcome or excluded. I found no specific description of males being excluded from events; however, Schmidt (2016) reported feelings of isolation among male baccalaureate nursing students that might easily lead to exclusion from informal networks. Specifically, they reported differences in communication styles between themselves and female nurses, as well as unprofessional behaviors (gossip, drama, conflict) among the female nursing staff. This behavior might discourage females as well as males from participating with the group in social settings.

Male nursing students in Carnevale and Priode's (2018) phenomenological study also reported feeling, and in some cases actually being, excluded from clinical learning experiences by nursing staff. One of their participants recounted how his own classmates, as well as "seasoned clinical staff treated them as if not a part of the 'girls' club" (p. 287).

In addition to exclusion and gender bias, Carnevale and Priode (2018) identified the career choices and acceptance as themes in their data. Participants reported an expectation from both physicians and nurses that they would continue their education

rather than remain a nurse. Although some male nursing students reported feeling acceptance, and even special status, some of the examples of acceptance seemed to be contingent on some type of quid pro quo. Examples included helping female students lift and bathe patients, which is an expectation noted by earlier authors (MacWilliams et al., 2013; Rajacich et al., 2013). Other examples included bringing quality notes to study session, or providing leadership to the female, often younger, students. That said, other students reported feeling accepted because faculty and clinical staff wanted to see them succeed and wanted to ensure that their learning needs were being met.

Lack of mentoring. Using classical grounded theory, Hale and Phillips (2018) interviewed 15 nurses to explain the processes involved in nurse-to-nurse mentoring. The participants reported developing confidence as professionals as their main concern. The authors found that the process of *confidencing*, or helping nurses develop confidence, "was resolved through intense reciprocal interactions between protégés and their mentors" (p. 162). With few men in nursing, it is difficult for aspiring male nurses to find mentors of the same gender. Women in male-dominated professions have reported a "lack of significant mentoring relationships" (Diehl & Dzubinski, 2016, p. 189). No studies were found concerning male or female nurses mentoring junior male nurses. Recent male graduates interviewed by Juliff et al. (2015) reported that the male nursing faculty were reassuring and inspiring. The authors recommended inclusion of more male faculty to promote more males in the profession and gender neutrality in nursing. I will discuss this barrier further, as well as lack of sponsorship and lack of support, in the faculty section of this review.

Female organizational culture. Men can find it difficult to be understood or appreciated when they find themselves overwhelmed by feminine norms in nursing academia. This is similar to Diehl and Dzubinski's (2016) observation that females may find it difficult to advance in an "overwhelmingly male organizational culture and norms" (p. 190). Chan, Chan, Yu et al. (2014) found three themes consistent with this mesobarrier. The first was control of male students' voices. In their interviews, the students reported the perception that, as males, they did not have a voice in the program. The second way in which male students were challenged by a feminine organizational culture was the nursing curriculum. The authors reported their belief that the curriculum was insensitive to gender differences. Two students remarked that obstetrics should be an elective because males would not be allowed to work in that area after graduation. Similarly, the authors found that male students were disinclined to study pediatrics and community health nursing because they believed that they would not be allowed to practice in these specialties.

The third challenge described by Chan, Chan, Yu et al. (2014) was the male experience in a female-oriented curriculum. The male students believed that their experience with the curriculum was different from that of female students. The students expressed sentiment that the curriculum was designed to appeal to female strengths; for example, although males better understood technical aspects of the profession, they struggled with communication and care plans, both of which were emphasized in the curriculum.

Concerning the curriculum, female researchers in Norway studied how male and female nursing students interacted with simple equipment during curriculum-based skills training (Solbraekke et al., 2013). The authors observed that the male students gravitated to stethoscopes and other masculine items and avoided less masculine items defined by the authors as bedpans, wash basins, and washcloths. The researchers also noted that the female students followed the prescribed procedures, whereas males joked and frequently did not follow the recommended technique. Speculation included the concepts of "male chauvinism" and "breech of ethics," and the brief consideration that the males simply used humor to mitigate discomfort or awkwardness was characterized with the words "clown" and "juggler" (p. 647). The authors wrote at some length about male students refusing to fold a washcloth around their hands as instructed. No mention was made as to whether the wash cloth would fit around the male students' hands, as it was assumed that they would be able to accomplish the task as easily as the female students. To the contrary, in another study (Jordal & Heggen, 2015), the researchers recognized the importance of adapting curriculum to accommodate a diverse student population. They used a narrative analysis to study six female and three male nursing students in Norway. The researchers concluded that curricula should be updated to include contemporary narratives about caring inclusive of diverse social classes, ethnicities, religions, and genders.

Salary inequity. Even in nursing, men are paid more than women (Muench, Sindelar, Busch, & Buerhaus, 2015). Diehl and Dzubinski (2016) defined salary inequity as "being underpaid" (p. 190). A recent analysis of two annually administered surveys,

together spanning 25 years, compared male and female nurses' salaries according to work setting, clinical specialty, and job position in the United States (Muench et al., 2015). The researchers found that male nurses continued to be paid more than female nurses even when work-related variables were considered.

Male nurses appear to be more motivated by money than female nurses (de Souza Costa, Fernandes de Freitas, & Hagopian, 2017; Kluczyńska, 2017). A Brazilian study of 59 male nurses over a 50-year time period found 90% of the participants went on to achieve specialized degrees (de Souza Costa et al., 2017). Forty percent of the participants achieved master's degrees, and 30% achieved doctoral degrees. A Polish study with 17 male nurse participants found that some of the participants chose nursing as a career field for self-fulfillment or because they enjoyed helping people (Kluczyńska, 2017). The men who sought nursing as a second career, or found their way into nursing "by accident," (p. 370) entered either as an alternative or gateway to medical practice or for practical reasons such as higher income or job security. The latter group actively sought out managerial and other positions that offered a higher income. Whatever the reason males choose to enter nursing, money may be a motivator in their educational and career choices.

Tokenism. According to the most recent data available, only 8% of practicing nurses in the United States are male (KFF, 2017), and according to the AACN (2015), only 5.4% of nursing faculty are male. Tokenism is the condition of "being in the minority (less than 15%) gender or race of a proportionally skewed workgroup" (Diehl & Dzubinski, 2016, p. 190). Men in nursing easily meet this criterion.

Unequal standards. Male nurses and nursing students may be called upon more than their female counterparts to perform certain tasks. This is similar to Diehl and Dzubinski's (2016) observation that males in leadership positions in male-dominated professions are often guilty of "holding women to higher performance standards than male counterparts" (p. 188). Some male nurses and nursing students have reported being expected to help with lifting patients and controlling violent patients more frequently than their female counterparts (MacWilliams et al., 2013; Rajacich et al., 2013).

Workplace harassment. Nursing and nursing education are overshadowed by a perception of, and more recently studies on, incivility (Clark, Ahten, & Macy, 2014; Clark et al., 2013; Del Prato, 2013). Workplace harassment is "repeated behaviors that provoke, frighten, intimidate, or bring discomfort to the recipient" (Diehl & Dzubinski, 2016, p. 191). Much of this incivility has been directed toward nursing students and recent graduates. The problem has become sufficiently pervasive that several tools have been developed to measure nursing students' perceptions of uncivil treatment from hospital staff nurses (Anthony et al., 2014; Tecza et al., 2015).

Far too frequently nursing students are subjected to incivility from faculty members in their own programs. Mott (2014) studied nursing students' perceptions of faculty bullies in two Midwestern schools. Only one male student was included in the study; his perception of experiences with faculty bullies was noted as "different" (p. 147) and warranted further investigation, but no further details were given.

Another recipient of uncivil treatment is the recent graduate. After reviewing 16 articles, D'ambra and Andrews (2014) concluded that incivility is a key determinant of

new graduates' job satisfaction. Clark et al. (2014) found that a problem-based learning scenario effectively helped new graduates learn to manage workplace incivility.

Male nursing students are perhaps more susceptible to incivility than their female counterparts. As mentioned previously, male nurses experience isolation (Schmidt, 2016; Sedgwick & Kellett, 2015) in the female-dominated profession and male nursing students were found to be uncomfortable in an environment filled with "gossip, drama, and conflict" (Schmidt, 2016, p. 680). Some authors have found unfair treatment (Abushaikha et al., 2013; MacWilliams et al., 2013) and blatant hostility (Sayman, 2015) toward male nurses and male nursing students.

Individual (Micro) Barriers

The literature would suggest that men differ from women in the way they experience life on a personal level (Sayman, 2015; Schmidt, 2016; Sedgwick & Kellett, 2015). It is not surprising that Diehl and Dzubinski's (2016) microbarriers do not lend themselves to describing the experiences of men in nursing and nursing education at the personal level as well as they do at the societal and organizational levels. In order to demonstrate consistency with Diehl and Dzubinski's framework, I have attempted to relate, where possible, the microbarriers found in the literature to similar, or in some cases opposite, microbarriers identified in their study.

Feelings of isolation. The feelings of isolation described by Schmidt (2016) are somewhat antithetical, yet seem to be a counterpart, to personalization. Diehl and Dzubinski (2016) defined personalization as "assuming personal responsibility for system or organizational problems" (p. 192). Rather than feeling responsible, male nurses were

more likely to feel disconnected altogether. Sedgwick and Kellett (2015) explored feelings of isolation in male nursing students in Alberta, Canada. Using a modified version of Somers' (1999) Belongingness Scale–Clinical Placement Experience Questionnaire, the authors found that male nursing students scored significantly lower than females on the efficacy subscale, which measures confidence in clinical performance. Although there were no overall differences on the esteem or connectedness subscales, males scored lower on several specific questions from these scales, reporting feelings of discrimination and not belonging. The authors concluded that the male students felt marginalized and discriminated against.

Identity. Male nurses and nursing students struggle to reconcile their personal identities with the societal and organizational beliefs that their role is somehow different from that of a female in the same position. This identity struggle is similar to the psychological glass ceiling that Diehl and Dzubinski (2016) defined as "unwillingness to appear assertive; undervaluation of one's own abilities" (p. 192). Sayman's (2015) 10 Midwestern male interviewees described struggling to find their own identities, often relying on superior skills or role performance to feel masculine. Some of Sayman's participants reported workplace harassment and abuse as well. Rajacich et al. (2013) found that male nurses in Canada expressed satisfaction with their ability to help others through the practice of nursing but feared "burn out" (p. 75) and described multiple gender-related concerns. These concerns included unwelcoming patients and staff, feeling unappreciated, and being expected by female colleagues to avoid intimate procedures with female patients even after developing rapport with the patient.

Role strain. The role strain experienced by men in nursing is different, but perhaps analogous to the work-life conflict experienced by women. Diehl and Dzubinski (2016) defined work-life conflict as "challenges balancing professional responsibilities with personal family responsibilities" (p. 192). Five of six studies that MacWilliams et al. (2013) reviewed relating to role strain in male nurses found that male nurses or nursing students experienced more role strain than females, particularly in peri-partal nursing which covers the time period immediately before, during, and immediately after childbirth. In their literature review, Chan, Chan, Lui et al. (2014) reported eight articles related to psychological differences between genders. Although three of the eight studies found female nursing students felt more stress due to family obligations, one found no difference, and the remaining four found that male nursing students experienced more stress than female nursing students.

Fear of accusations. The potential for male nurses and nursing students to be accused of inappropriate contact creates barriers at the organizational and the personal level. As mentioned previously, men are often treated differently than women, which is discrimination at the organizational and group level. The fear of accusations, which may have no comparable counterpart in the female experience, affects men emotionally and professionally at the microbarrier level.

A review of literature addressing men in nursing and intimate touch was conducted using both CINAHL and the British Nursing Index (Whiteside & Butcher, 2015). The search yielded nine qualitative and two quantitative studies. Seven of the nine studies identified the theme of fear that touch might be misinterpreted. O'Lynn and

Krautscheid (2014) evaluated the effectiveness of a 3-hour intimate care workshop for male nursing students. The purpose of the workshop was to help male nursing students develop the knowledge, skills, and attitudes to cleanse female genitalia in a respectful, non-threatening manner. The students who participated in the workshop reported being more comfortable, less fearful of their touch being misperceived, and scored higher on patient respect and dignity scales than males in the control group. After interviewing 166 Australian nursing students, Crossan and Mathew (2013) recommended that nursing programs train all nursing students in providing intimate care.

Barriers Experienced by Male Faculty

Macrobarriers. Societal barriers, or macrobarriers that affect male nurses and nursing students apply similarly to nursing faculty. These barriers affect nursing faculty in their training (as students) and careers (as practicing nurses) before entering academia. There is little doubt that societal barriers affect male nursing faculty by forming the societal context in which the academic environment exists, though little research has been reported on this topic.

Mott and Lee (2018) interviewed 12 male nursing faculty to discover why men enter and remain in nursing academia. The authors identified three themes that emerged during the interviews: Reasons for entering and staying in nursing academia, navigating unfamiliar waters, and "feeling like the odd man out" (p. 43). The participants reported a love for teaching, a desire to be a role model for male nursing students, and the positive impression that previous teachers had left with them.

Mesobarriers. Most of the limited number of studies concerning mesobarriers and microbarriers to nursing faculty have been conducted irrespective of gender. Nevertheless, it is important to understand the environment in which these barriers exist for all nursing faculty. The following research relates to barriers experienced by both genders for completeness, male faculty where studies are available, and female faculty where applicable.

Using a phenomenological approach, Peters (2014) identified five themes and seven subthemes related to incivility experienced by eight novice female nursing faculty similar to the barriers experienced by the women in male-dominated professions described by Diehl and Dzubinski (2016). The two themes at the mesobarrier level were territorialism and perceptions that the senior faculty wanted to see the junior faculty fail. The territorialism described by the Peters is consistent with Diehl and Dzubinski's description of male gatekeeping, or "controlling which women have access to leadership positions and their boundaries of leadership" (p. 190). The perceived desire of senior faculty to see junior faculty fail is consistent with the glass cliff, or "placing a woman in a high-risk role with a likelihood of failure" described by Diehl and Dzubinski (p. 189). Peters's subthemes associated with territorialism included departmental power struggles (female organizational structure), perceptions that senior faculty felt threatened by junior faculty (lack of support), and unexpected displays of unprofessionalism (workplace harassment). A subtheme that supported the perception that senior faculty wanted to see junior faculty fail was unwillingness of senior faculty to mentor junior faculty (lack of mentorship).

Lack of mentoring. Male nursing faculty participants in Mott and Lee's (2018) study reported that nursing academia was unfamiliar and difficult to navigate. Some of the interviewees emphasized the importance of male mentors to help new faculty learn about their new environment. Others talked about the importance of helping the male students find their way in the feminine environment. Many felt that they could now be a great help to new male faculty and students because they understand the challenges that their mentees are facing.

The lack of male leaders in nursing education led the Robert Wood Johnson Foundation to aggressively recruit male candidates for their widely esteemed Nurse Faculty Scholars program (Brody et al., 2017). Recognizing the need for more males and racial/ethnic minority members as educational leaders, the foundation provides junior leaders the opportunity to collaborate and seeks to increase visibility and opportunities for underrepresented groups. Brody et al. studied 18 male scholars from seven different cohorts that participated in the program. The authors concluded that both genders need to be aware of the effect of stereotypes in nursing education and suggested strategies for overcoming challenges and developing leadership skills.

Lack of support. Support from leadership is highly valued by male nursing faculty. Diehl and Dzubinski (2016) defined lack of support as "decisions overturned or not supported" (p. 189). The preponderance of Evans' male nursing faculty participants, 96%, reported support from administration as an important factor in faculty retention. Only positive work environment, flexible schedules, and a collegial environment scored

marginally higher. Anecdotally, one male nurse faculty scholar in Brody et al.'s (2017) study recalled the following incident of lack of support from a superior.

> I've been denied a grant for from (sic) my college specifically because of my gender. I was told, "You're a guy, you're going to be fine, and you don't need this money as much as somebody else." I don't think being denied a grant based on my sex is fair. (p. 279)

This type of decision making can introduce bias into research generation that is reminiscent of the bias already documented (Polit & Beck, 2012) in research publication.

Salary inequity. Diehl and Dzubinski (2016) classified salary inequity, which is usually typified by a gender-based salary differential in favor of males, as a mesobarrier. Academic positions potentially pay less than other employment opportunities for nurses. Muench et al. (2015) compared multiple work settings, clinical specialties, and positions in their study of salary differences. Of nine positions, the researchers found senior academic and education/research positions to be similar in salary to middle and upper management positions in the clinical arena. There was a much wider salary range for the senior academic category, though it was the one position with no significant gender gap. The only other category with no significant gender pay gap was orthopedic nursing. Evans (2013) studied recruitment and retention of nursing faculty including the effects of racial/ethnic and gender minority status. The majority of Evans' participants "at all teaching levels believed that higher salaries are needed to increase the number of nurse educators" (p. 18). Although the author found salary to be less important as a retention

factor, 93% of males and 9% of racial/ethnic minority members continued to rank it as very important.

Tokenism. One of Brody et al.'s (2017) participants recalled an entire career of isolation and witnessing the isolation of other males in nursing practice and academia.

> I can certainly agree with the feelings of isolation and the experiences of microaggressions as a male in nursing. While I have worked with isolated male nurses previously, my experience as a Nurse Faculty Scholar was the first time in my entire career where I felt like I had an actual cohort of males in my profession and people who understood my lived experience. At the RWJF meetings, I finally felt less alone in my work. (p. 280)

This quote reflects feelings of isolation as well as tokenism, being one with few, if any, peers.

Workplace harassment. Using the previously developed Faculty-to-Faculty Incivility Survey, Clark et al. (2013) studied perceptions of incivility among 588 nursing faculty across the United States. Twelve of the uncivil behaviors quantified by the researchers were reported by more than 50% of the respondents. The researchers also quantified reasons for not reporting uncivil behavior and found that the top three were fear of retribution, lack of support, and lack of clear policies. Sometimes it is the students who are uncivil. Danque, Serafica, Lane, and Hodge (2014) studied hospital educators providing training to newly hired graduates. The educators reported that students displayed uncivil behavior toward them as well as fellow students.

Microbarriers. Peters (2014) identified two themes at the microbarrier level for novice female faculty. Participants reported feelings of rejection (personalization), behavioral changes such as avoidance in response to incivility (conscious unconsciousness), and some participants reported that they were considering leaving academia. Subthemes supporting feelings of rejection included self-doubt (personalization), fear of reprisal (workplace harassment), and belittlement (workplace harassment). Peters recommended that future studies include males as well as those who are ethnically diverse.

Communication style constraints. Again, the male counterpart to this identified barrier might seem to be antithetical to the female experience, yet the result is the same. Diehl and Dzubinski (2016) defined communication style constraints as "constraints on communication style used to express leadership" (p. 192). Whereas male leaders do not always recognize a soft female voice, female leaders may fail to appreciate an assertive male voice. A statement from one of Brody et al.'s (2017) participants explains the male nurse faculty member's experience of this barrier.

> It has taken me a long time to understand that certain behaviors and communication strategies that are fine in other settings may be misconstrued in a negative light in a female-dominant environment. Through mentorship and feedback, I have come to better understand (though still have a long way to go) in how to be confident in my actions and opinionated without being viewed as arrogant because of my willingness to directly express strong opinions. This has not been an issue for me though I know it is for many other male nurses. (p. 282)

Differences in male and female communication styles, such as described in this example, can lead to misunderstandings and potentially strain or damage relationships.

The third theme identified by Mott and Lee's (2018) study was the odd man out. Under this theme, participants described feelings of isolation, communication style differences, and fear of accusations. Participants expressed concern that gender-based communication style differences affected their communication with colleagues and believed that sometimes they were excluded altogether. Some expressed a fear of sexual accusations arising related to students' grades or counseling female students in a private office. In concluding this theme, the authors asserted that male nursing faculty believed that they must try to assimilate into a feminine culture to which they will never truly belong.

Summary and Conclusions

In this literature review, I have identified 19 barriers and four reasonable counterparts to the 27 barriers described by Diehl and Dzubinski (2016) as well as one additional barrier. This includes five of the six macrobarriers, nine of the 16 mesobarriers, and one counterpart for a total of 10 mesobarriers as well as four counterparts to microbarriers found in the female experience. The additional microbarrier, fear of accusations, may have no similar counterpart in the female experience. It seems likely that the majority of the remaining barriers may also exist, either as described or as reasonable counterparts, yet have not appeared in the sparsity of recent peer-reviewed literature.

What is not known is the extent to which these barriers have prevented men from entering and advancing as nursing faculty. This study expanded the current knowledge by exploring the relationship between societal and organizational variables and the proportion of males in nursing academia as well as their career success as indicated by several career variables. Societal level macrobarriers to male nursing faculty may be indicated by regional differences. Furthermore, as many of the barriers to men in nursing and nursing education have moral implications (presumption of homosexuality, sexual predatory behavior, men care less than women), these organizational-level mesobarriers may be more prevalent in religious institutions than secular institutions. In Chapter 3 I will further explain the variables included in the study and the research methods used to explore the relationships between them.

Chapter 3: Research Method

The purpose of this quantitative study was to identify disparities that may exist between the proportions of male and female nursing faculty within geographic regions and institutional types in an attempt to detect barriers that may prevent men from entering, continuing, and advancing in nursing education. In this chapter, I will detail the design and methodology for this secondary analysis of archival data, including a discussion of sampling procedures for the survey serving as the source of these data, followed by explanations of the variables, how they were measured, and how they were analyzed for this study. Additionally, threats to validity and ethical procedures will be explained.

Research Design and Rationale

In this study, I employed a quantitative, nonexperimental design with archival survey data. According to Creswell (2012), this design is appropriate when quantitative data are available that have not been fully explored. The variables for this study are summarized in Table 1. The study was limited to the timeframe and collection methods of the previously collected data. The results of this study expand extant knowledge related to societal and organizational barriers to male nursing faculty.

Table 1

Variables in the Study

	Variable	Variable levels	Scale
RQ1			
Institutional variables	Region	North Atlantic, Midwest, South, West	Nominal
	Type	Public, private secular, private religious	Nominal
Instructor variable	Gender	Male, female	Nominal
RQ2			
Institutional variables	Region	North Atlantic, Midwest, South, West	Nominal
	Type	Public, private secular, private religious	Nominal
Instructor variables	Education level	No doctoral degree, doctoral degree in a field other than nursing, DNP, research focused doctoral degree in nursing	Ordinal
	Rank	Instructor, Assistant, Associate, Full Professor	Ordinal
	Tenure	No, on tenure track, tenured	Ordinal
	Administrative position	No, yes, chief nursing administrators	Ordinal

Methodology

Population and Sample

The population for this study was all schools of nursing in the United States, including U.S. territories, that offer a bachelor's degree or higher. According to the National Center for Education Statistics (2017), 1,041 brick-and-mortar and online institutions offer a bachelor's degree or higher in nursing in the United States and its territories. The archival data set on which this study was based included schools that voluntarily completed the ASBGN.

One consideration I made concerning sampling was statistical power, the probability of rejecting the null hypothesis, which is calculated using the sample size, the effect size, and the required significance level (see Cohen, 1992). Samples sufficiently large to produce expectations of greater than 5 per cell are considered appropriate for chi square analyses (Parratt, 1961). Consequently, the large sample used in this study was appropriate for my analyses.

Archival Data

Each year since 1978, the AACN (2017a) has invited schools to complete the ASBGN. The survey includes institutional, student, and faculty items, all in multiple-choice format (AACN, 2017a). In this study, I used two of the nine institutional characteristics measured by the survey, region and institutional type, as well as five of the 13 instructor characteristics measured by the survey: education level, rank, tenure status, administrative responsibility, and administrative title. The AACN (2017f) makes standardized data sets publicly available for a reasonable price and will compile custom

sets, such as was necessary for this study, for a reasonable fee (AACN, 2017b). I requested data for the 896 schools that participated in the survey for the 2017 academic year after obtaining Walden University Institutional Review Board (IRB) approval.

Operationalization of Constructs

Using feminist theory to describe the male experience did not come without challenges. Feminist theory is built on the constructs of male power in paternalistic societies with the resultant male ideals taking precedence as the standard by which worth or importance is measured (Bierema, 2009). The question of power is uncertain in that dominance over a profession may not be the same as dominance in society. Peters (2014) identified barriers experienced by novice female nursing faculty that they perceived were created by seasoned female nursing faculty. Diehl and Dzubinski (2016) found that some women in power in male-dominated professions likewise failed to facilitate, or even obstructed, the advancement of other women in the workplace. Perhaps, an individual protecting their position in the dominant class is more related to being in a dominant position itself rather than to gender. To the extent that this is true, males likely experience barriers related to position in a female-dominated environment similar to the way females experience the same or similar barriers in male-dominated environments.

The notion of gender-based standards rests on the idea that inherent differences between genders make each gender at least appear to be more suited to some activities or occupations than others (Diehl & Dzubinski, 2016). In my literature review, I found barriers to males in nursing based on gender (Sayman, 2015; Schmidt, 2016; Sedgwick & Kellett, 2015) that are counterparts to barriers experienced by females as described by

Diehl and Dzubinski (2016). Unlike barriers related to position, barriers related to gender seem to be experienced differently, and in some cases, exactly opposite between genders.

A brief look at the percentages of practicing nurses who are male in different states (KFF, 2017) would suggest regional differences. In this study, I examined whether there are regional differences in the percentage of nursing faculty who are male as well as regional differences in the career status of male faculty as compared to female faculty. Such regional differences might indicate varying degrees of societal-level barriers and may correspond to barriers affecting males in nursing practice. Similarly, organizational-level barriers might have been reflected in any gender differences found between different types of institutions.

Definitions of Variables

Institutional variables. Institutional variables were measured by the ASBGN at the nominal level. The variable, institution type, includes public, private secular, and private religious institutions. The four regions are North Atlantic, Midwest, South, and West. Region is self-explanatory for public schools that reside in one state; however, the region for private schools, whether religious or secular, can be difficult to define (Y. Li, Manager of Data Services, AACN, personal communication, December 15, 2017). Therefore, according to Ms. Li, for schools accredited by the AACN as one school with multiple campuses, the region in which the main campus resides is considered the region for all programs, as is the case for Chamberlain University, a school that is accredited in Illinois though the campuses are located in multiple regions. However, for schools that are accredited individually, each campus belongs to the region in which it resides; for

example, Herzing University is an institution with multiple schools independently accredited in different regions.

Instructor variables. The gender of faculty was a binary variable, male or female. The remainder of the faculty variables were at the ordinal level. Faculty education level was measured in ascending order as no doctoral degree, doctoral degree in a field other than nursing, Doctorate of Nursing Practice (DNP), or research-focused doctoral degree in nursing. Rank was measured as lecturer/instructor, assistant professor, associate professor, or professor. Rank is another variable that seems, in most cases, self-explanatory. Tenure was measured with the categories of not tenured, on tenure track, or tenured. I combined the categories for administrative responsibility and administrative title to create the new variable, administrative position.

Data Analysis Plan

The data I acquired from the AACN were assumed to be accurate and require little cleaning beyond use of descriptive statistics to ensure coding accuracy. Statistical Package for the Social Sciences (SPSS) software was used for all chi square data analyses to address the following research questions:

RQ1: What is the association between gender and region and/or institution type for nursing faculty?

$H_0$1: There is no association between gender and region and/or institution type for nursing faculty.

H_a1: There is a significant association between gender and region and/or institution type for nursing faculty.

RQ2: What is the association between gender and region and/or institution type with each of the following characteristics of nursing faculty: (a) education level, (b) rank, (c) tenure, and (d) administrative position?

$H_0$2: There is no association between gender and region and/or institution type with each of the following characteristics of nursing faculty: (a) education level, (b) rank, (c) tenure, and (d) administrative position.

H_a2: There is a significant association between gender and region and/or institution type with one or more of the following characteristics of nursing faculty: (a) education level, (b) rank, (c) tenure, and (d) administrative position.

Data analysis. I performed chi square analyses to address both research questions. Use of chi square was appropriate for the analysis of these data because the test requires each of the variables to be categorical and each variable to be comprised of at least two categories (see Polit & Beck, 2004). The institutional variables, region and type, were nominal and comprised of four and three categories, respectively. The instructor variable gender was binary. The remaining instructor variables, the career status variables, were ordinal, each having at least three categories.

The 4x3x2 chi square analysis I conducted for RQ1 used the institutional variables of region and type and the number of male and female faculty, respectively. Any significant difference between the expected number and the actual number of male and female faculty for any region, type, or combination of these justified rejecting the null hypothesis, indicating the independence of the variables, and supported the

alternative hypothesis that the number of male faculty was associated with the respective variables. I used simple percentages during interpretation to determine the direction of any gender differences.

To address RQ2, I used gender as well as the institutional variables of region and type for five separate chi square analyses. A separate chi square analysis was conducted for each of the career status variables of education level (four levels), rank (four levels), tenure (three levels), and administrative position (three levels). Additional testing was conducted with a chi square analysis of rank using two levels. Significant differences between expected and observed frequencies supported rejection of the null hypothesis, indicating independence of the variables.

Threats to Validity

Concerning internal validity, individual nursing schools reported their own data on the ASBGN; therefore, self-selection was a consideration, as is usually the case with survey data (see Polit & Beck, 2004). Self-selection may introduce bias into a study if extraneous characteristics influence respondents' decisions to participate in the survey and result in confounding of one or more of the analyses (Polit & Beck, 2004). This bias was likely minimal in this study due to the high response rate. The data were obtained by strata, not from each individual faculty member, so it was not possible to consider faculty members' individual data in the analyses. No mechanism was available to collect these data or validate, correct, or fill in any missing data that were omitted or submitted erroneously by the participating institutions.

Concerning threats to external validity, the sample used in this study only included faculty from baccalaureate, master's, and doctoral programs that completed the ASBGN. Therefore, the results may not be generalizable to faculty from other types of nursing programs. Institutional and individual faculty characteristics, such as workload, productivity, and research, may have introduced variability that could not be accounted for in this study.

Concerning construct validity, I was not able to directly measure barriers that exist for male faculty in nursing education in this study. Concerning the first research question, it seemed reasonable to expect a similar proportion of male faculty in each region or institutional type; this was my rationale for conducting the chi square analyses. My interpretation of any differences between expected and actual proportions of male compared to female faculty, however, rested on the assumption that a proportionate number of male nurses want to work as full-time faculty.

Perhaps the analyses for the second research question served to validate the first. That is, it seems reasonable to expect that males in the nursing faculty were at least as likely as females to seek rank, tenure, and promotion into administrative positions. As men are more motivated by money than women (Muench et al., 2015), men might be more likely to seek rank and promotion. This second research question, as the first, was based on the expectation that career status variables should be equal for males and females across the four regions and three institutional types. The chi square test for independence is a valid statistic for determining any differences between the expected values and those measured within the sample.

Ethical Procedures

The data set was not obtained or analyzed until this study was approved by the Walden University IRB (Approval Number 04-25-18-0531696). As these archival data had already been collected from schools that voluntarily submitted surveys, no additional risks were incurred by the faculty concerning the retrieval of data. The requested data were aggregated across institutions and delineated by region, type, and gender for each of the original five faculty career status variables. It was not possible to deduce information about any particular school from the data set. The data set was received in spreadsheet format as an e-mail attachment and downloaded onto a secure drive. The e-mail containing the data set was deleted as soon as the downloading procedures were complete. No inadvertent identification occurred during the analysis of the data, but if any had occurred it would have been immediately reported to my committee, the IRB, and the respective custodian of the data. Results of the study will be disseminated as group data only. The data sets will be retained on the secure server for 5 years and then properly destroyed.

Summary

In this chapter I summarized the methodology for the study. The sampling methods, data collection and retrieval methods, as well as the variables collected by the survey were explained. The data analysis plan included six chi square analyses. Ethical considerations, though minimal for this type of study using archival survey data, were nonetheless important especially concerning the safeguarding of data and dissemination

of results. Threats to validity were also discussed. in the following chapter I will discuss the results of the study.

Chapter 4: Results

The purpose of this quantitative study was to identify disparities that may exist between the proportions of male and female nursing faculty within geographic regions and institutional types in an attempt to detect barriers that may prevent men from entering, continuing, and advancing in nursing education. In this chapter I will review the data collection procedures, describe how the data were handled and analyzed, and summarize the significant findings from the analyses. The research questions and hypotheses were as follows:

RQ1: What is the association between gender and region and/or institution type for nursing faculty?

$H_0$1: There is no association between gender and region and/or institution type for nursing faculty.

H_a1: There is a significant association between gender and region and/or institution type for nursing faculty.

RQ2: What is the association between gender and region and/or institution type with each of the following characteristics of nursing faculty: (a) education level, (b) rank, (c) tenure, and (d) administrative position?

$H_0$2: There is no association between gender and region and/or institution type with each of the following characteristics of nursing faculty: (a) education level, (b) rank, (c) tenure, and (d) administrative position.

H_a2: There is a significant association between gender and region and/or institution type with one or more of the following characteristics of

nursing faculty: (a) education level, (b) rank, (c) tenure, and (d) administrative position.

Data Collection

In 2017, AACN sent the link to the 2017 AACN Annual Survey to 1,009 member and nonmember schools that offered baccalaureate and/or graduate nursing programs. Three e-mail reminders were sent during the response period from September 11 until December 31 of that same year (AACN, 2017e). Of the 1,009 schools, 875 schools completed the faculty section of the survey (i.e., 760 member schools and 115 nonmember schools; response rate = 87%), and 896 schools completed the dean/chief nursing administrator section of the survey (i.e., 770 member schools and 126 nonmember schools; response rate = 89%). In total, data were submitted for 20,953 faculty who were identified as male or female and were classified on a number of career-related variables.

Data Retrieval and Recoding

Although minimal cleaning of the data was expected to be necessary, some formatting was required before I could enter the data into SPSS. As expected, the number of faculty for whom gender was not reported was minimal (0.36%). These data were excluded from all analyses.

When received, data pertaining to the chief nursing administrators were recorded on one page of the Excel spreadsheet and data pertaining to faculty were listed on another. Combining the faculty and administrator pages was complicated by some differences in how the data appeared on the spreadsheet. Faculty education level, for

example, was listed for faculty in the categories of no doctoral degree, doctoral degree in a field other than nursing, DNP, and research-focused doctoral degree in nursing. However, the administrators' data were divided into 10 categories, requiring data to be compressed to fit into the same four categories as used for faculty. I accomplished this compression by recoding variables in SPSS.

Rank was similar on both pages, except the faculty page included an additional category of *other*, whereas the administrator page included the additional category of *no rank*. A simple calculation revealed that 17.59% of the faculty were categorized as other, whereas only 8.63% of administrators were designated as having no rank. The most apparent presumption for so many others seemed to be that these faculty members were lecturers, clinical faculty, or skills lab faculty. I received approval from the Walden University IRB to request additional data from the AACN; specifically, data specifying the area of teaching by rank parsed by the previously approved strata were obtained. As expected, a large number of faculty were designated in the ranks of clinical professor, clinical associate professor, clinical assistant professor, and clinical instructor. A small number of faculty remained categorized as other.

The categories for tenure were reported as expected, except the faculty page had an additional category of other, which clearly did not refer to faculty employed at schools without a tenure system because that category was included in the survey. Participating schools were invited to specify what they considered other, but no such data were available in the data set. Therefore, I treated the category of other as missing data and excluded it from the analysis.

Administrative responsibility and administrative title were inextricably combined in the data set. The faculty page listed the number of faculty in each stratum (by region and institutional type) that had less than 50% administrative responsibility, but no titles were available. The number of faculty with 50% or more administrative responsibility was divided among administrative titles. The administrators were similarly divided by administrative title, with no indication if any had less than 50% administrative responsibility. The data set did not provide any mechanism for determining how many faculty or administrators might have less than 50% administrative responsibility and yet carry an administrative title or have any significant degree of responsibility yet lack an administrative title. Further complicating the data, faculty with administrative responsibility were assigned 11 titles, five of which overlapped with titles assigned to administrators. To solve this dilemma, I collapsed administrative responsibility into administrative title and did not analyze it separately; however, to avoid confusion, I chose to use the term *administrative position* instead of title. With the assumption that any faculty with less than 50% responsibility did not hold an administrative position, the revised categories of no administrative position, administrative position, and chief nursing administrators were used.

Concerning handling of the data, the frequency counts were presented in rows that I transposed into columns using the transposition function in Excel before the data were loaded into SPSS. Each page was uploaded into SPSS as a separate data file. Crosstabulations were computed to verify each data file against the original dataset.

Data Analysis

Pearson developed the chi square statistic in 1900 to compare observed frequencies to expected frequencies (Agresti, 2013, p. 18). Chi square has been widely used to test for associations among categories of data. Agresti (2013) recommended further testing of significant chi square results because the test "provides little information about the nature or strength of the associations" (p. 80). Of four suggested methods for follow-up testing, comparing Pearson's residuals was the most expedient method for determining which values best explained significant associations between the variables within each stratum in which there was a significant result.

I conducted post hoc testing as described by Agresti (2013) within each stratum that reached significance in the primary chi square analysis. Using SPSS to identify these strata, any *z* score greater than 1.96 (the .05 level cutoff for rejection of null hypotheses) was squared to produce a chi square value. Next, I determined *p* values for each of the identified *z* scores using the significance for chi square function in SPSS. Cramer's V was used to assess the strength of the relationship, with values between .000 and 1.000 indicating either no relationship or a perfect relationship, respectively (see Polit & Beck, 2004).

Many authors recommend adjusting the *p* value that is considered significant when conducting multiple tests in order to avoid an inflated probability of Type 1 errors (Agresti, 2013). Bonferroni's correction reduces the probability of Type I errors by dividing alpha by the total number of cells and thus reducing the *p* value and changing the threshold for which *p* is considered significant (Agresti, 2013). Agresti (2013)

recommended less conservative corrections for small samples, binomial parameters, or when the number of groups is very large, but I found no rationale for selecting a less conservative correction that was appropriate for these data. The method is conservative, perhaps overly so, for explaining a finding within a stratum that has already met significance within a larger analysis (Sharpe, 2015). Cohen (1994) asserted that

> the "sophisticates" who use procedures to adjust their alpha error for multiple tests (using Bonferroni, Newman-Keuls, etc.) are adjusting for a nonexistent alpha error, thus reduce their power, and, if lucky enough to get a significant result, only end up grossly overestimating the population effect size! (p. 1,000)

Based on this information, I decided not to use Bonferroni's correction.

Results

In the sample, 1,313 faculty were identified as male (6.3%) and 19,640 were identified as female. Geographically, the largest percentage of all nurses in the sample was in the South (36.1%), followed by the Midwest (28.7%; see Figure 1).

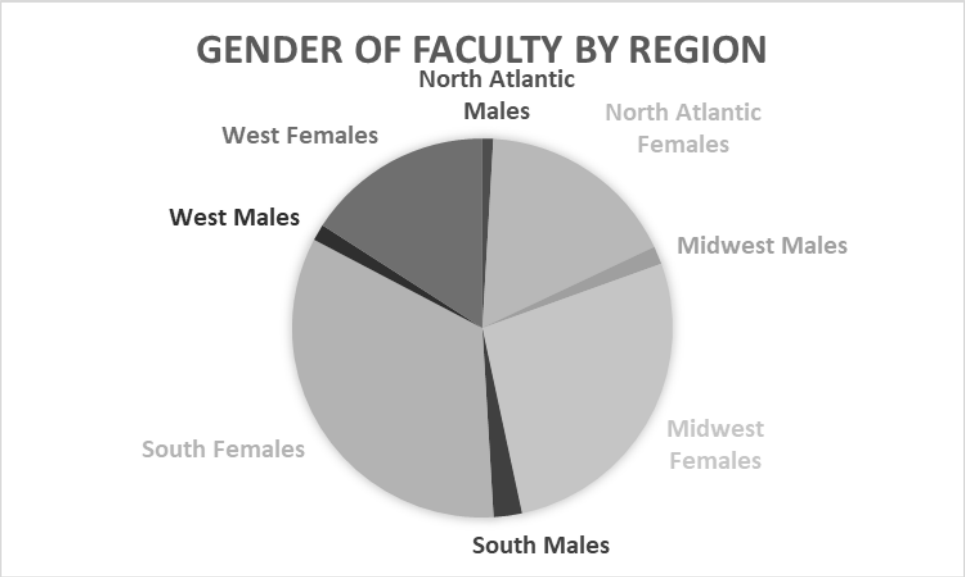

Figure 1. Faculty distribution by region and gender.

Among the institution types (see Figure 2), the majority of the sample was employed in public institutions (51.3%) and the remainder were split nearly evenly between private secular (24.4%) and private religious (24.2%).

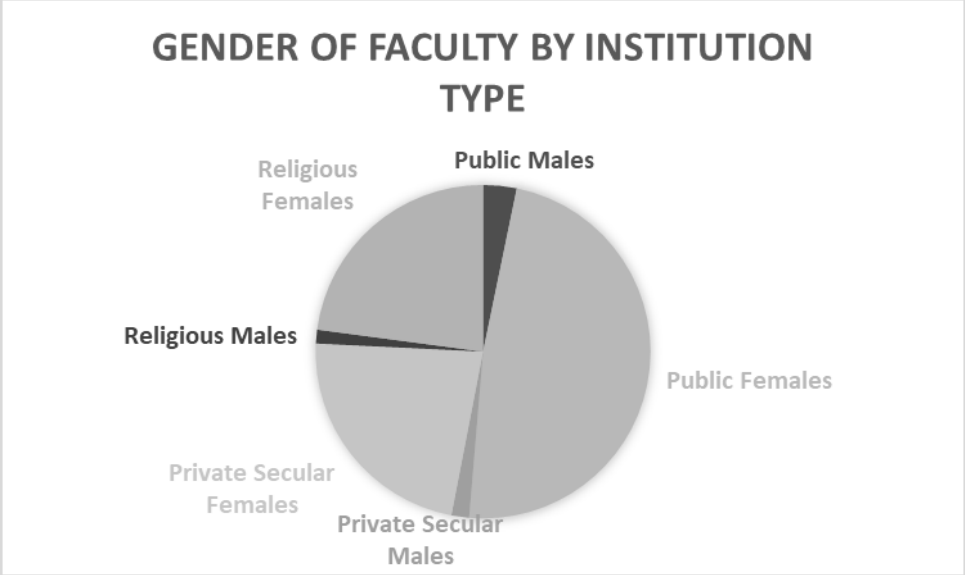

Figure 2. Faculty distribution by institution type and gender.

Percentages of Nursing Faculty Who Are Male

I conducted a 4 x 3 x 2 (Region x Institution Type x Gender) chi square analysis. No strata had greater than 20% of cells with expected cell counts less than 5, indicating that the data had not violated the assumption. Both region, $\chi^2(3, N = 20{,}953) = 41.40$, $p = .000$, and institution type, $\chi^2(2, N = 20{,}953) = 9.22$, $p = .010$, were found to be significantly associated with gender.

I layered the variables to produce a true three-way table in SPSS. Considering organizational (i.e., institutional) barriers exist within the context of societal (i.e., region) barriers, nesting institution types within the regions seemed consistent with the theoretical framework. Therefore, I layered the table first by region, with institution type in rows and gender in columns. The North Atlantic region, in particular, was significantly associated with gender, $\chi^2(1, N = 3{,}764) = 15.74$, $p = .000$. Post hoc analysis revealed a significantly smaller percentage (2.7%) than expected of males in the North Atlantic region religious schools, $\chi^2(2, N = 987) = 16.00$, $p = .0001$, much smaller than the public (6%) and private secular schools (6%) in the region.

To better distinguish societal from institutional influences, I conducted separate chi square analyses for region by gender (controlling for institution type) and institution type by gender (controlling for region). Post hoc analyses for gender (see Figure 3) revealed significantly lower percentages of males in the North Atlantic, $\chi^2(3, N = 20{,}953) = 10.24$, $p = .0066$, and Midwest regions, $\chi^2(3, N = 20{,}953) = 12.96$, $p = .0047$ and a significantly higher percentage of males in the West, $\chi^2(3, N = 20{,}953) = 26.01$, $p = .000$.

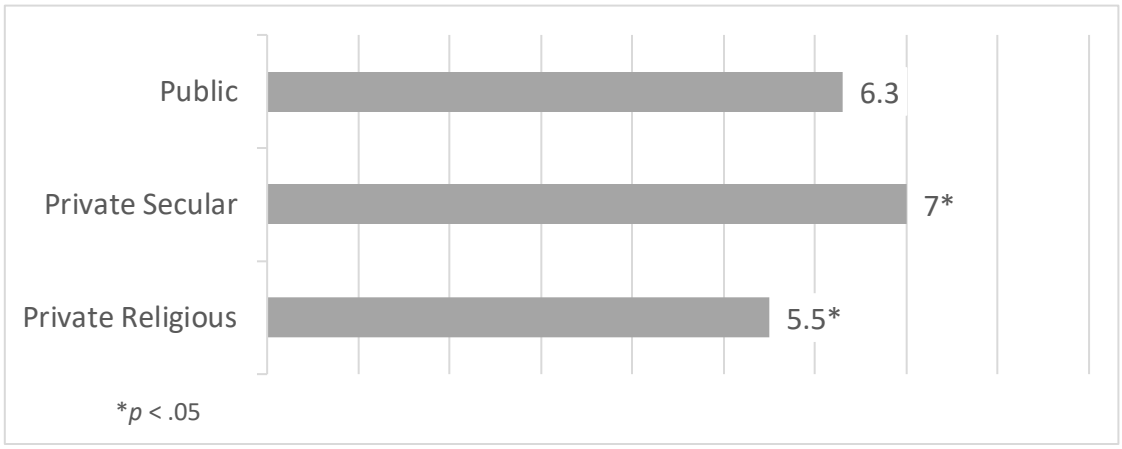

Figure 3. Percentage of male nursing faculty by region.

Post hoc analyses by institution type (see Figure 4) revealed statistically significant lower percentages of males in religious institutions, $\chi^2(2, N = 20{,}953) = 6.25$, $p = .0439$, and higher percentages in private secular institutions that were not quite significant, $\chi^2(2, N = 20{,}953) = 5.76$, $p = .0561$. The percentage of males working in public institutions was not significantly different than the other institution types, $\chi^2(2, N = 20{,}953) = .01$, $p = .9203$.

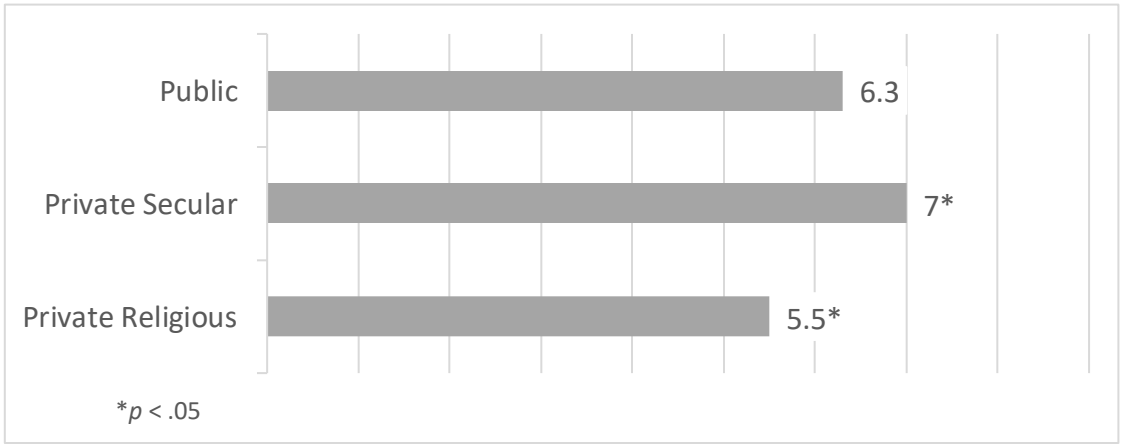

Figure 4. Percentage of male nursing faculty by institution type.

Career Status Variables

The second research question was used to examine the career status of male nursing faculty. The first of these variables, highest education attained by faculty, was used as an indicator of the proportion of males who were prepared, at least academically, to achieve the latter three variables. The latter three variables—rank, tenure, and administrative position—were used as indicators of male faculty achievement.

Education level. A 4 x 3 x 2 x 4 (Region x Institution Type x Gender x Education Level) chi square analysis was conducted. The only stratum in which more than 20% of cells had an expected cell count less than 5 was North Atlantic religious institutions. An overall association was found between the four variables, $\chi^2(3, N = 20{,}953) = 28.843$, p = .000, specifically in the South in public institutions, $\chi^2(3, N = 5{,}049) = 14.716$, p = .002, and in the West in private secular institutions, $\chi^2(3, N = 1{,}172) = 23.144$, p = .000.

A higher percentage of males held doctoral degrees in all four regions though post hoc testing revealed this was only significant in private secular institutions in the West, where 51.4% of males, compared to 68.8% of females, did not hold a doctoral degree, $\chi^2(3, N = 1{,}172) = 13.69$, $p = .0034$. Post hoc analysis revealed that significantly higher percentages of males (26.9% to 20.1%) in the South held DNPs compared to their female counterparts, $\chi^2(3, N = 7{,}556) = 12.96$, $p = .0047$, particularly in public institutions, $\chi^2(3, N = 5{,}049) = 13.69$, $p = .0034$. A higher percentage of males (19.7% to 12.5%) in the Western region held DNPs, $\chi^2(3, N = 3{,}622) = 12.25$, $p = .0066$ as well, but with the significantly higher percentage of males (21.5% to 8.3%) in private secular institutions, $\chi^2(3, N = 1{,}172) = 20.25$, $p = .0002$.

Rank. A 4 x 3 x 2 x 4 (Region x Institution Type x Gender x Rank) chi square analysis was conducted. The ranks of professor, associate professor, assistant professor, and instructor were combined with their respective clinical-only counterparts. The original inclusion of chief nursing administrators with no rank and faculty who continued to be classified as other resulted in five of the strata having more than 20% of cells with expected cell counts less than 5. These 2,027 (9.7%) cases were therefore excluded, reducing the number of strata in violation to one, religious institutions in the North Atlantic region. An overall association was found between these four variables, $\chi^2(3, N = 18{,}926) = 8.820$, p = .032, specifically in public institutions in the South, $\chi^2(3, N = 4{,}740) = 14.650$, $p = .002$, and West, $\chi^2(3, N = 1{,}592) = 8.097$, $p = .044$.

Post hoc analysis of Southern public institutions revealed a significantly higher percentage of male faculty (56.2% to 45.7%) were employed at the rank of assistant professors than their female counterparts, χ^2 (3, N = 4,740) = 12.96, p = .0047. Additional testing was conducted to determine if any relationship existed between gender and promotion above the rank of assistant professor. For the additional testing, the ranks of professor and associate professor were combined (including clinical professors and clinical associate professors) into one category and assistant professor (including clinical assistant professors) was another category. Instructors were assumed to be noncompetitive for the higher ranks and were not included. Remaining others and administrators with no rank were also excluded. As expected, the only significant results remained in the public sector of Southern and Western institutions. In the South a significantly lower percentage of males than females (33.1% to 41.2%) attained ranks

above assistant professor at public institutions, $\chi^2(1, N = 3,707) = 6.76$, $p = .0093$. In the West, also in public institutions, a significantly lower percentage of males than females (34.9% to 49.0%) attained ranks above assistant professor, $\chi^2(1, N = 1,247) = 6.25$, $p = .0124$.

Tenure. The 4 x 3 x 2 x 4 (Region x Institution Type x Gender x Tenure Status) chi square analysis resulted in five of the strata having greater or equal to 20% of cells with expected cell counts less than 5. Excluding faculty in the poorly defined other category ($n = 90$, .4%) reduced the number of strata violating the assumption to three, while additionally excluding institutions with no tenure system ($n = 4,334$, 20.6%) reduced the number of these strata to two, private secular institutions in the Midwest and the West. An overall association was found between these four variables, $\chi^2(2, N = 16,529) = 16.280$, p = .000, specifically in the North Atlantic region in private secular institutions, $\chi^2(2, N = 1,117) = 11.28$, $p = .004$, in the South at public institutions, $\chi^2(2, N = 4,960) = 9.63$, $p = .008$, and in the West at public institutions, $\chi^2(2, N= 1,693) = 10.17$, $p = .006$.

A lower percentage of males attained tenure in all four regions. Post hoc analysis revealed a significantly greater percentage of males than females (77.1% to 57.2%) in private secular institutions in the North Atlantic region were in nontenure track positions, $\chi^2(2, N = 1,117) = 10.89$, $p = .0043$, and a smaller percentage of males than females (8.6% to 21.4%,) in this stratum had attained tenure, $\chi^2(2, N = 1,117) = 6.76$, $p = .034$. Likewise, in public institutions in the South, a significantly smaller percentage of males than females (14.5% to 21.8%) attained tenure, $\chi^2(2, N = 4,960) = 9.61$, $p = .0082$.

Contrary to results from other strata, however, a significantly greater percentage of males than females in public institutions in the West (30.1% to 19.8%) were on tenure track (albeit not tenured), $\chi^2(2, N = 1{,}693) = 7.29$, $p = .0261$. A smaller percentage of males than females attained tenure in public institutions in the West (15.4% to 25%), but the difference fell just short of reaching significance, $\chi^2(2, N = 1{,}693) = 5.76$, $p = .0561$.

Administrative position. A 4 x 3 x 2 x 3 (Region x Institution Type x Gender x Administrative Position) chi square analysis was conducted. No strata had greater than 20% of cells with expected cell counts less than 5. Neither region nor institution type, nor the combination, was found to be related to administrative position.

Table 2

Significant Chi Square Analyses

Variable	Region	Institution type	Chi square	*df*	*N*	*p*	Cramer's *V*
Gender	Overall		41.40	3	20,953	0.000	0.044
		Overall	9.22	2	20,953	0.010	0.021
Education	Overall	Overall	28.84	3	20,953	0.000	0.037
	South	Overall	13.91	3	7,556	0.003	0.043
		Public	14.72	3	5,049	0.002	0.054
	West	Overall	12.62	3	3,622	0.006	0.59
		Private Secular	23.14	3	1,172	0.000	.141
Rank	Overall	Overall	8.82	3	18,926	0.032	0.022
	South	Overall	11.78	3	7,063	0.008	0.041
		Public	14.65	3	4,740	0.002	0.056
	West	Overall	12.14	3	2,741	0.007	0.067
		Public	8.10	3	1,592	0.044	0.071
Tenure	Overall	Overall	16.28	2	16,529	0.000	0.031
	North Atlantic	Overall	12.49	2	3,378	0.002	0.061
		Private Secular	11.28	2	1,117	0.004	0.100
	South	Overall	7.85	2	6,557	0.020	0.035
		Public	9.63	2	4,960	0.008	0.044
	West	Overall	7.55	2	2,261	0.023	0.058
		Public	10.17	2	1,693	0.006	0.078
Rank Above Assistant Professor	South	Overall	5.91	1	5,414	0.015	0.033
		Public	6.70	1	3,703	0.010	0.043
	West	Overall	9.83	1	2,195	0.002	0.067
		Public	6.40	1	1,247	0.011	0.072

Summary

Region and institution type, both collectively and individually, were found to be associated with the percentage of full-time nursing faculty who are male, partly supporting the alternative hypothesis for the first research question; there is a significant association between gender and region and/or institution type for nursing faculty.

Concerning the second research question, the higher percentage of male than female nursing faculty who had doctoral degrees was found to be significant in Western private secular institutions. Significantly more males had DNPs in both the South and in the West, particularly at public and private secular institutions respectively. These findings support the first part of the alternative hypothesis, that there is a significant association between gender and region and/or institution type with the education level of nursing faculty.

A higher percentage of males were found at the rank of assistant professor in Southern public institutions and a lower percentage at the rank of professor in Western public institutions, supporting the second part of the alternative hypothesis, that there is a significant association between gender and region and/or institution type with faculty rank. A significantly lower percentage of male faculty attained tenure in private secular institutions in the North Atlantic region and at public institutions in the South, supporting the third part of the alternative hypothesis; there is a significant association between gender and region and/or institution type with faculty tenure. No association was found between gender, region, institution type, and administrative position. I will discuss these findings further in Chapter 5.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this quantitative study was to identify disparities that may exist between the proportions of male and female nursing faculty within geographic regions and institutional types in an attempt to detect barriers that may prevent men from entering, continuing, and advancing in nursing education. In this study, I employed a quantitative, nonexperimental design with chi square analyses of archival survey data. This study was conducted to assess the overall presence and career status of male nursing faculty by region and institutional type, using Diehl and Dzubinski's (2016) model as a theoretical framework.

Interpretation of the Findings

The proportion of nursing faculty who are male in this study seems to follow regional patterns similar to that of the percentage of male nurses in practice (see KFF, 2017). The data show a pattern of the smallest percentages of practicing male nurses in the North Atlantic and the Midwest regions and greater percentages of males in the South and the West (KFF, 2017). This pattern is consistent with the percentages of male faculty in this study, which were significantly lower in the North Atlantic region than in other regions, followed by significantly lower percentages in the Midwest, not significantly higher in the South, and significantly higher in the West. These regional findings are consistent with the literature which revealed a similar pattern in that the studies that found stereotyping and discrimination were conducted in the Midwest (Sayman, 2015; Schmidt, 2016). The study that most candidly described faculty-to-faculty incivility, particularly senior faculty towards junior faculty, was conducted in the Northeast (Peters,

2014). The most significant disparity between the genders was in the percentage of male nursing faculty in religious institutions in the North Atlantic region.

While the percentage of faculty who are male is larger in the South and significantly larger in the West than in other regions, it is still less than the percentage of males in practice in those regions, suggesting that the institutional level (i.e., mesobarriers) in academia might be greater than those barriers in practice even in these regions. The literature supports the notion that this is at least partly due to the male affinity to prioritize monetary compensation above other motivations (de Souza Costa et al., 2017; Kluczyńska, 2017). In the current study, I did not address the pay differential between practice and academia.

Men in public institutions in the South and West have not attained ranks above assistant professor at the same rate as female faculty and likewise have not attained tenure in public institutions in the South, suggesting that the greater percentage of male faculty in these strata might not be accompanied by an equivalent percentage of males advancing in rank or influence. Significantly lower percentages of males attained tenure in private secular institutions in the North Atlantic, the only region where more nursing faculty (of both genders) were employed in private secular institutions than in the public sector. To the contrary, it was in the private secular sector in the West that a significantly higher percentage of males were found on tenure track, though a higher percentage of males with tenure was not yet realized.

Limitations of the Study

The aggregate data did not allow for exploration of patterns beyond the original strata. Although I found the lowest percentage of male nursing faculty in the religious institutions in the North Atlantic region, it is not known whether this phenomenon exists in all religious institutions or in institutions affiliated with a particular religion or denomination that is largely represented in this region. The social significance of this study, potentially leading to attenuating the nursing shortage by increasing the number of male nurses entering the workforce, is based on the assumption that more male faculty will result in more male nurses entering the workforce. The literature review supported this belief (e.g., Chan, Chan, Yu et al., 2014; Juliff et al., 2015); however, I found no quantitative studies testing this assumption. Without data disaggregated at least to the institutional level and the inclusion of student data, no such relationship could be tested in this study. The dataset represented a snapshot in time, precluding the analysis of any trends or historic influences. Rank and tenure differences between male and female nursing faculty, for example, might be better explained by a longitudinal study.

Recommendations

The results of this study provide a guide for exploring gender barriers in nursing education through more robust statistical analysis, such as regression analysis, as well as qualitative study within the region or institution type in which each result was found. Data are available at the institutional level from the AACN and other sources that could be analyzed within the four regions and three institution types where I found significant relationships in this study. For example, data from religious institutions could be

analyzed to determine differences in percentages of male faculty between institutions affiliated with various religions or denominations. A study to determine why men have not achieved a rank above assistant professor proportionate to their doctoral preparation might be conducted in public institutions in the South and West, whereas a similar study concerning tenure might be conducted in the private secular institutions in the North Atlantic region or the public institutions in the South. Finally, institutional-level data could be analyzed to quantitatively determine if a relationship exists between the number of male nursing faculty and the number of male nursing students entering the workforce.

Longitudinal studies might better determine whether men are advancing in numbers and career status both nationally and in specific strata. Retrospective studies, for example, might be used to determine the rate at which males achieved a rank above assistant professor or earned tenure in various strata. The study might include the percentage of males with doctoral preparation some number of years ago and the number of males at a certain rank or tenure status some number of years later. A future study could also be conducted to determine if the significantly higher percentage of men on tenure track in the private secular institutions in the West eventually results in more men attaining tenure.

Qualitative and mixed methods studies may assist in better understanding the actual barriers and opportunities that affect male nurse educators. The results of this study could help focus such studies in a particular stratum of interest, such as religious schools in the North Atlantic region. Whether quantitative, qualitative, or mixed methods, additional studies are needed at the local level where more specific data can be collected

and barriers, such as those described in the literature, can be studied in the environments in which they occur.

Implications

The quantitative nature of this study, based solely on aggregate data representing a snapshot in time, made it difficult to speculate as to specific implications for society, though it is apparent that a small percentage of males enter, persist, and advance in nursing academia in some of the studied strata more than others. Further studies must be conducted in these strata to determine the exact nature of any existing barriers, their magnitude, and to determine if there is a link between faculty gender and the percentage of males in the nursing workforce. That said, the findings of this study underscore the importance of combating stereotypes (see Crossan & Mathew, 2013; Juliff et al., 2016; Stanley et al., 2016) and other barriers already described in the literature, especially in the Midwest and North Atlantic regions and particularly in religious institutions in the North Atlantic.

Of several statistically significant findings, the most remarkable was the low percentage of male nursing faculty in religious institutions within the North Atlantic region, the region also noted for having the least number of male nursing faculty. Whatever the reasons, the apparent lower percentage of males in nursing practice in the North Atlantic region, significantly lower percentage of male nursing faculty in this same region and remarkably lower percentages of male nursing faculty in North Atlantic religious institutions appears consistent with Diehl and Dzubinski's (2016) characterization of mesobarriers embedded in the context of macro barriers; therefore,

the results of this study quantitatively demonstrated Diehl and Dzubinski's model. Perhaps, the implication of these findings with the most practical significance is that the feminist model was useful in an expanded gender studies context in which males are the minority.

Conclusions

The results of this study identify the relationships between region and institution type and the proportion of nursing faculty who are male as well as their attainment of education, rank, and tenure status. The most significant finding was the very low percentage of male nursing faculty in religious institutions in the North Atlantic region. Although findings were only significant in some strata, regional patterns show that the direction of the differences was nearly universal. Although a higher percentage of male than female faculty members held doctoral degrees in every region, a lower percentage of males had attained tenure in every region or held a rank above assistant professor in every region except the Midwest. I found no association between region, institution type, gender, and administrative position. Although the number of males in nursing and nursing education is growing, differences between regions and institution types indicate that discrepancies still exist at the societal and institutional levels that may prevent men from entering, staying, and advancing in nursing education.

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