A Quantitative Study of Why Female Administrators Do Not Aspire To The Superintendency In Western Pennsylvania

by

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To The Superintendency In

Western Pennsylvania

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ABSTRACT

Women have played integral and instrumental roles in public education since its inception, yet women continue to be underrepresented in one major educational position, the superintendency. This study examined female principals in Western Pennsylvania and perceived barriers of these females in aspiring to the superintendency. Data for this study were collected through an electronic survey, which asked respondents to rate the intensity of perceived barriers to the superintendency, provide demographic information, and complete two open-ended questions.

Perceived barriers were stratified into three barrier taxonomies: 1) structural; 2) sociocultural; 3) intrapersonal. Data were analyzed using frequency distributions, independent samples *t* tests, ANOVAs and chi-squared tests. Data analysis focused on female superintendent aspiration rate, perceived barriers by demographic category, perceived barriers by intent to aspire, and demographic category of superintendent aspirants.

The analysis determined that intrapersonal barriers were most often identified as perceived barriers to the superintendency by female principals. The female principals in this study aspire to the superintendency at a rate higher than the percentage of females currently holding superintendencies is Pennsylvania. The respondents that intend to pursue the superintendency in the future were younger and had been employed as a building principal more recently. Recommendations to increase female representation in the superintendency are: 1) expanded networks, and mentorships; 2) restructuring the superintendent position; 3) alter policies governing the superintendency in Pennsylvania; and 4) change community and societal assumptions.

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CHAPTER 1

INTRODUCTION

The superintendent of schools is the chief executive officer, most senior, and most influential administrator in public education. This dissertation focuses on the gender of those individuals who occupy the superintendent position or superintendency, specifically in Western Pennsylvania. This study explores potential explanations for why superintendents in Pennsylvania have been predominately males even though females comprise the majority of individuals employed as professionals in public education today. To appreciate this paradox more fully, it is helpful to review the history and evolution of the superintendency, after which the degree of female representation in the superintendency will be examined, before setting out the purpose of this study and the research questions it is designed to answer. Finally, in this chapter, the significance of this study is summarized, key definitions are set out, and study limitations and delimitations are noted.

The Superintendency in Historical Perspective

Known as their first great public profession (Blount, 1998), females have held over 50% of the public school teaching positions in the United States since 1870. 1880 was the most equally represented year for male versus female teachers in public education. In 1880, females comprised 57% of the teaching population and males 43%. Females have not held less than 60% of the teaching force in public education since 1882, and the percentage of female teachers in public education peaked at 86% in 1920. Figure 1 shows the percentage of female teachers in public education from 1870 to 2010.

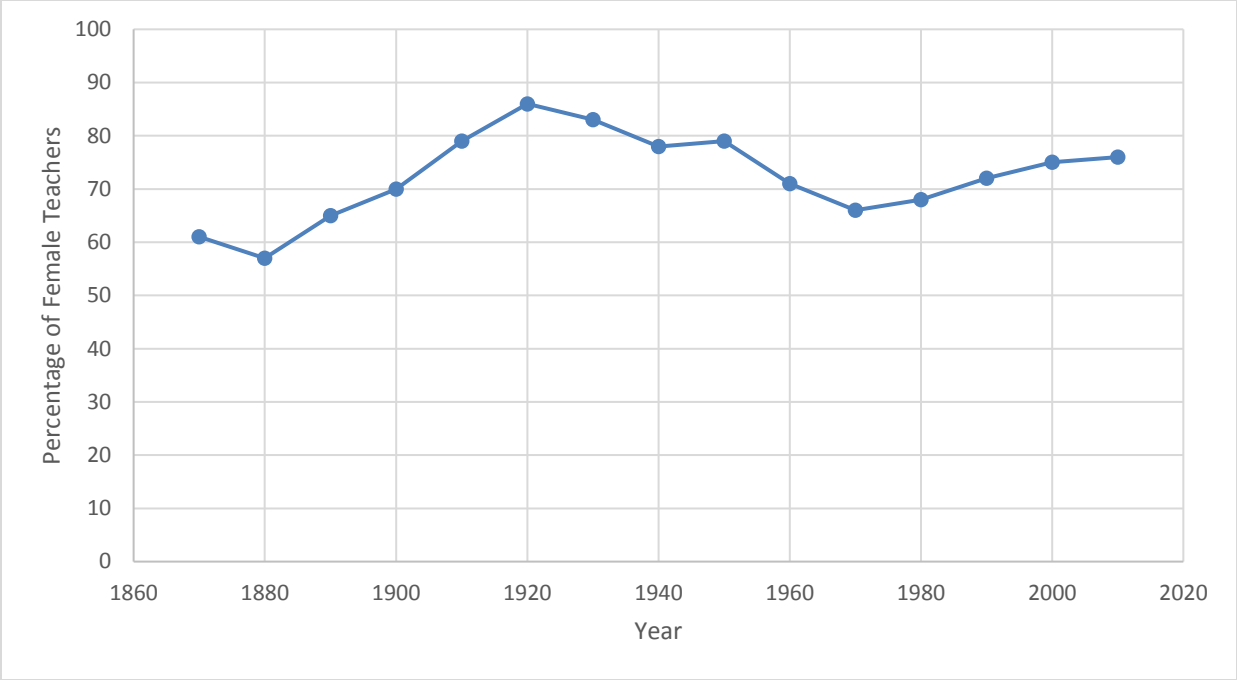

Figure 1. Percentage of female teachers since 1870. Data for percentage of teachers from US. Bureau of the Census. *Historical Statistics of the United States from colonial times to 1970* (1975); U.S. Department of Education, National Center for Education Statistics, Schools and Staffing (SASS), (2013).

As females became the majority gender in the teaching force, so they began to increase in number in administrative roles in education. In 1928, females held 55% of the elementary principalships and 8 percent of the secondary principalships, but comprised only 1.6% of the district superintendent positions (Shakeshaft, 1987). By 2013, females held 52% of all principalships, combined elementary and secondary, in US public schools, and comprised approximately 24% of district superintendent positions (Bitterman, Goldring, and Gray, 2013). Female representation and contribution in public education is significant at all levels, however, the position of superintendent, in comparison to teacher and building principals, seems to be lagging.

As education evolved in the American colonies and subsequent United States of America, so has the position of superintendent within the public school system. Thomas Alsbury (2008) states that, "Historically, schools and school governance structures began and have continued to be a seemingly paradoxical combination of both the active exercise of politics and the declaration of its apolitical purity" (p. 126). Alsbury (2008) lists five historical roles the superintendent's position has under gone. They are classified as *teacher-scholar (1895 to 1910), manager (1910 to 1930), democratic leader (1930 to mid-1950), applied social scientist (mid-1950 to 1980), and communicator (1980 to present)*. The transformation of the superintendent's roles and responsibilities from *teacher-scholar (1865 to 1905)* to *communicator (1980 to present;* Alsbury, 2008) will be summarized in this section. Likewise, a discussion of the political and apolitical nature of the position will be presented.

Teacher-scholar (1895 to 1910)

As local school systems grew in larger cities, the need for clerical and day-to-day operations positions arose. Therefore, school boards created, as an agent of the board of education, the position of superintendent to conduct recordkeeping and managerial duties including schoolhouse visitations and regular reporting to the school's board of education (Glass, 1992). By the 1890s all major cities had superintendents (Alsbury, 2008). With population growth and changes in school board organization, a superintendent of schools became a stable position in more school districts across the country. Yet, many superintendents were little more than teachers selected by school boards and hired with no experience in leadership or organizational management (Alsbury, 2008).

Manager (1910 to 1930)

According to Glass (1992), "During the (20th century), the growth of the superintendency paralleled the growth of public schools, and was inextricably linked to the evolution of school boards" (p. 1). As school boards began to operate in a strictly legislative capacity, they delegated policy implementation authority to the superintendent. This delegation created a superintendent position and job expectations more closely related to the duties of a company CEO, leadership in nature, rather than solely managerial (Norton, Webb, Dlugosh & Sybouts, 1996). On the heels of the superintendent position's transformation from day-to-day operations into a district leader (Alsbury, 2008), came the desire for superintendents to reform the public school system and build a new understanding with school boards.

This new understanding helped to modify the political perspective school boards held of the public school system as part of a political spoils system that decided "what teachers would be hired, and what textbooks would be purchased and, which vendors would be patronized" (Glass, Bjork, & Brunner, 2000, p. 2) to a system built on professional standards. In concert with school reform, superintendents had the foresight to keep these negotiated gains that transformed the public school system by creating a professional ideology for the position of superintendent of schools that included education for future superintendents in the areas of business values, knowledge of curriculum and instruction, teacher preparation, and staff training (Glass, 1992). To aid in the development of future executives, school superintendents created organizations dedicated to advancing educational supervision, collegial communication, and preparatory courses at the university level. One such organization was the National

Association of School Superintendents, later to be known as the American Association of School Administrators (AASA). This era in superintendent history is viewed with conflict and confusion between school boards and superintendents. School boards that were not wanting to lose political power to superintendents and superintendents who wanted to implement educational efficiencies and expertise into a local political system (Alsbury, 2008).

Democratic leader (1930 to mid-1950)

The Great Depression of the 1930s, again, changed the role of the superintendent (Alsbury, 2008). The economic decline of this era brought into question the role of superintendent as an executive, similar to that of a business leader for obvious reasons. Rather the superintendent as a grassroots manager and community mobilizer was established. The role of the superintendent as a political activist and spokesperson for gathering community support for schools had been established. (Alsbury, 2008).

Applied social scientist (mid-1950 to 1980)

The US Supreme Court decision *Brown v. Board of Education* in 1954 changed the role of school boards and superintendents in both duties and expectations (Norton et al., 1996). Following *Brown v. Board of Education*, the superintendent was no longer viewed as the sole educational authority of the school institution, rather the superintendent was viewed as a stepping stone towards achieving changes in social culture, such as increased social justice theory and local policy maneuvering. Beyond changing larger societal issues, using social science theory, was "a push to establish

school administration as a separate and legitimate academic discipline fueled by significant graduate study" (Alsbury, 2008, p. 129). The pressures placed on superintendents by school boards, parents, community members and politicians over the next 25 years were more adversarial than collaborative and more divisive than cooperative, thereby causing a questioning of the superintendent's role, responsibilities and decisions within the school system (Norton et al., 1996).

Communicator (1980 to present)

The new political nature of the position of superintendent did not wane through the 1980s and 1990s with the advent of new state and federal initiatives placed on school districts and a change from the industrial age to the information age. Initiatives, mandates and regulations continued in education through the change of the new millennia and developed into the present job description of superintendent. For example, a few of the more demanding and politically charged initiatives include, but are not limited to: reforms associated with the *A Nation at Risk* (1983) report, site based management, academic state standards, academic national standards, common core standards, high school graduation requirements, No Child Left Behind, state systems of student assessment, Adequate Yearly Progress, School Performance Profiles, student growth models, district report cards, teacher evaluations, merit pay, school choice, school vouchers, bring your own device, smartboards, discovery learning, teacher as the facilitator, charter and cyber charter schools, and IDEA (Norton et al., 1996).

As the role and responsibilities of superintendent have changed throughout history, how have the demographics of superintendent changed relative to this new

position? How have these ideological changes in the position of superintendent influenced female educators' decisions to seek superintendent certification and superintendent positions?

The responsibilities of a school district superintendent in the 21st century are extensive and diverse, requiring the ability to multitask through problems and devise several potential solutions for each pending issue. Norton et al. (1996), states a few of the possible scenarios a superintendent may encounter: "Inadequate financing; the superintendent's leadership role in school reform and improvement; alternative governance structures; superintendent-school board relations; the changing demographics of students, teachers, and administrators; violence and crime in the schools; and pressures from special interest groups" (p. 26). If the aforementioned statement is true, it indicates the need for a vast range of abilities and knowledge to effectively administer the superintendency.

In fact, a 2010 white paper from the American Association or School Administrators (AASA) by Michael F. DiPaola reviews the performance standards and job responsibilities expected of the contemporary superintendent (Figure 2). They are exceedingly inclusive of elements of virtually all of the prior characterizations of the superintendency, from teacher-scholar, to scientific manager, human relations or democratic leader, applied social scientist, and visionary leader and communicator. As Alsbury (2008) has noted: "Many present-day researchers believe that while these roles changed in their level of prominence over time, current superintendents still enact all these role attributes to some extent" (p. 127).

AASA Standard	Key Descriptor
Standard 1: Leadership and District Culture	Vision, academic rigor, excellence, empowerment, problem solving
Standard 2: Policy and Governance	Policy formulation, democratic processes, regulations
Standard 3: Communication and Community Relations	Internal and external communications, community support, consensus building
Standard 4: Organizational Management	Data-driven decision making, problem solving, operations management and reporting
Standard 5: Curriculum Planning and Development	Curriculum planning, instructional design, human growth and development
Standard 6: Instructional Management	Student achievement, classroom management, instructional technology
Standard 7: Human Resources Management	Personnel induction, development, evaluation, compensation, organizational growth
Standard 8: Values and Ethics of Leadership	Multicultural and ethnic understanding, personal integrity and ethics

Figure 2. Superintendent Standards from the American Association of School Administrators. DiPaola (2010)

So while overtime, and to an appreciable extent presently, a wide range of knowledge and skills have been expected of the superintendent, one thing has changed very little, that is the gender of the individuals occupying the superintendency. Using the roles described by Alsbury (2008) and a graphical depiction (Figure 3) of the historical data (Table 1) representing the percentage of females employed as superintendent of schools since 1910, it is apparent that females have been underrepresented in this educational position.

Table 1

Percentage of Female Superintendents in the U.S., 1910-2015

Year	Source	Percentage of Females
1910	Blount, 1998	8.94%
1930	Blount, 1998	10.98%
1950	Blount, 1998	9.07%
1970	Blount, 1998	3.38%
1990	Blount, 1998	4.94%
2000	Glass, 2000	14.45%
2010	Kowalski et al., 2011	24.10%
2015	Finnan et al., 2015	27.00%

Table 1 show the percentage of female superintendents in the United States using data compiled by Blount (1998), *Destined to Rule the Schools: Women and the Superintendency, 1873-1995*, Glass, (2000); Kowalski et al., (2011); and Finnan et al., (2015).

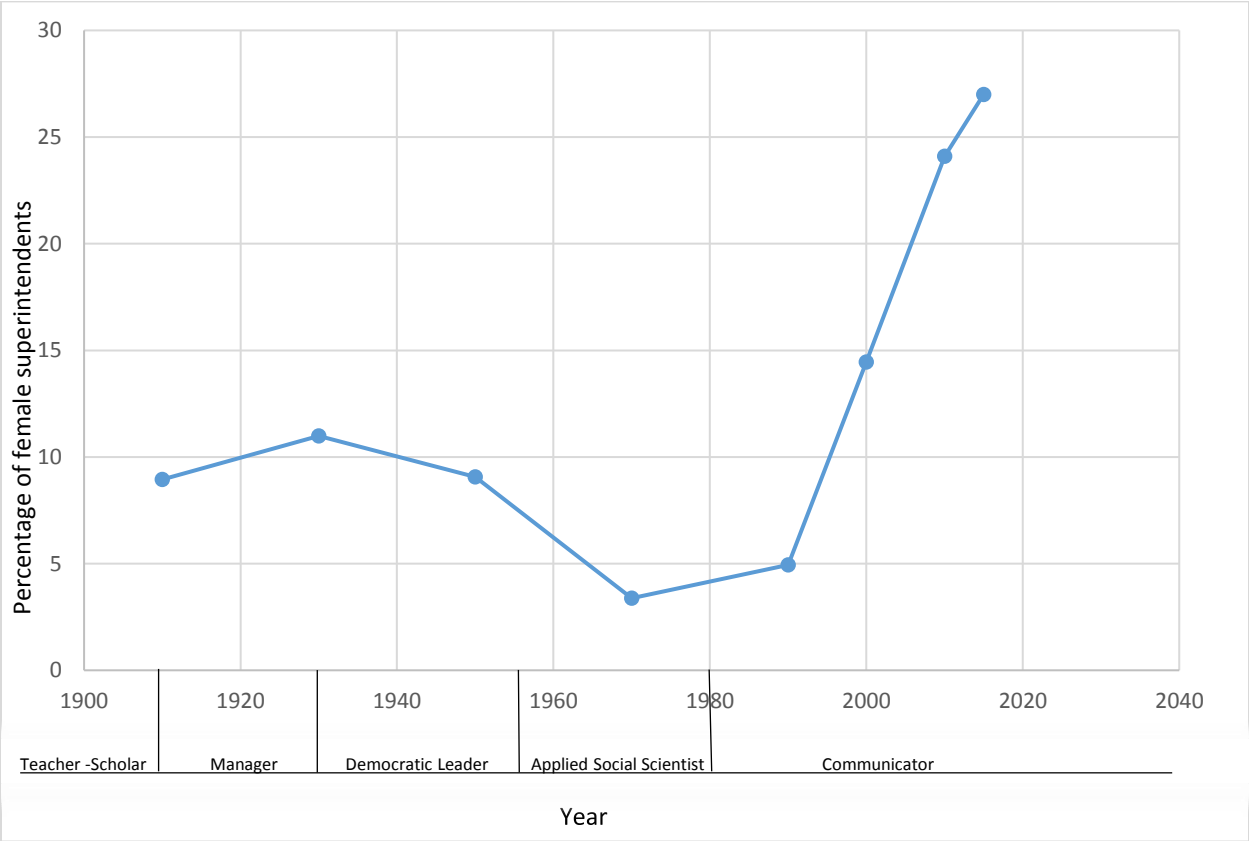

Figure 3. Female superintendents over the past 100 years. Data for percentage of superintendents from Blount (1998), Glass, (2000); Kowalski et al., (2011); and Finnan et al., (2015). Data for roles of the superintendent from Alsbury (2008).

Considering that females represent nearly 70% of all teachers and approximately half of the administrative positions, why have females been underrepresented in this one position. This problem is explored next.

The Problem: Underrepresentation of Females in the Superintendency

Women have played integral and instrumental roles in public education since its inception and continue to do so today. They comprise the majority of the workforce associated with schools, representing successful teachers, para-professionals, building administrators, secretaries, supervisors, custodians and transportation providers. As such female employees provide a disproportionate share of the stability and expertise necessary for public education to function effectively and efficiently; yet women continue to be underrepresented in one major educational position, the ranks of superintendent of schools.

As a number of authors have observed, this is troubling and raises the question of why female representation in the public school superintendency has been extremely low considering the number of females employed in these other capacities in public education (Brunner, 1998; Crabb, 1996; Craig & Hardy, 1996; Dana & Bourisaw, 2006; Derrington & Sharratt, 2009; Glass, 1992; Glass, 2000; Glass, Bjork, & Brunner, 2000; Grogan, 1994; Kamler, 2006; Meier & Wilkins, 2002; Mertz, 2006; Pavan, 1995; Skrla, Reyes, & Scheurich, 2000; Tallerico, 2000). This underrepresentation has been evident virtually continuously since the inception of the role. According to various estimates, the proportion of superintendents who were female has ranged from five percent during the early 1900s (Garn & Brown, 2008), to seven percent in the 1990s, to 14% in 2000 (Glass, 2000), to 18% in 2005 (Grogan & Brunner, 2005), and to 22% in 2006 (Derrington & Sharratt, 2009). More recent national estimates peg females at 27% of the nation's superintendents (Finnan et al., 2015).

Grogan (2005), while acknowledging the increasing number of female superintendents, nevertheless expresses dissatisfaction with the progress noting:

> Although the numbers of women in the superintendency have more than doubled over the past 10 years, they are still woefully small in light of the facts that women comprise 51 percent of the general population, 52 percent of elementary principals, 83 percentage of teachers in elementary settings. (p. 24)

Relying on such comparisons, commentators such as Glass (1992), an authority on the superintendency, has expressed grave concern about female underrepresentation and the apparent discouragement of female and other non-traditional aspirants for the superintendency, stating: "Considering the small number of minorities and women superintendents, job discrimination should be a national concern" (p. 27).

Data from the Commonwealth of Pennsylvania demonstrates a similar disparity between male and female superintendents. Dr. Barbara Nelson Pavan (1995) chronicles the "slow creep" of female entry into the superintendency in Pennsylvania in her paper, entitled, *First Year District Superintendents: Women Reflect on Contradictions between Education and Politics*, presented at the Annual Meeting of the University Council for Educational Administration. According to Pavan (1995), between the years 1970 and 1980, less than one percent of the superintendents in the Commonwealth of Pennsylvania were female. This percentage grew to 3.6% by 1985, and by 1995, 10% of the superintendents in Pennsylvania were female. Pavan (1995), in response to the dramatic increase in female superintendents evident by 1995, reminded her readers, "there exists in this state a sufficient number of certified and experienced women to more than double

this number" (p. 2). The number of female superintendents in Pennsylvania increased to about 28% in 2009 and that number has remained relatively unchanged over the past four years in PA (Buckheit, 2015).

By the 2014-2015 school year, 226 of 675, or approximately 28% of the full-time public school district superintendents, were female, according to PDE data. This percentage, while not insubstantial, still pales in comparison to the nearly 72% of female teachers (87,016 of 120,794) represented in the Commonwealth's K-12 classrooms the same year.

In the same 2014-2015 school year, a more equitable gender distribution between males and females was evident for supervisory and administrative positions other than the superintendency (Table 2). Using personnel categorized as administrative/supervisory by local districts, 48.6% were female. Thus females continue to be far more under-represented in the superintendency than in other administrative roles in school districts across the state.

Table 2

Personnel Categorized as Administrative/Supervisory in PA, 2014-2015

Position Title	% of Males	% of Females
Elementary: Principals/Asst. Principals	44.4%	54.6%
Secondary: Principals/Asst. Principals	69.2%	30.8%
Middle or K-12: Principals/Asst. Principals	59.3%	40.7%
Assistant Superintendent	56.2%	43.8%
Coordinator/ Supervisor	35.4%	64.6%
Total of positions listed above	51.4%	48.6%

Table 2 shows females comprise 48.6% of all administrative or supervisory positions within Pennsylvania public schools for the 2014-2015 school year. Thus, while

it would appear as Kamler (2006) and Pavan (1995) have suggested, that Federal legislation such as Title VII of the Civil Rights Act of 1964, Title IX in 1972 and the Glass Ceiling Act of the Civil Rights Act of 1991 may have expanded opportunities and fueled an increase in female representation in educational administration and supervisory titles overall, similar increases have not been realized in the position of superintendent of schools in Pennsylvania.

In summary then, both national and Pennsylvania data indicate the percentage of female superintendents is not representative of the general population of the U.S., the percentage of female classroom teachers in public education, nor even the percentage of females in other administrative or supervisory positions.

While as Pavan (1995), Glass (2000) and Grogan (2005) contend, and PDE data confirms, females are underrepresented in the superintendency compared to their presence in the ranks of teachers and even other administrators, it is important, however, to make a further comparison. Pennsylvania, like most other states, requires educators to hold licenses for various professional roles, including the role of superintendent of schools (22 PA Code § 49.172 and Section 10-1003 Public School Code). Thus to be considered qualified to be hired as a superintendent, one must complete a state-approved superintendent preparation program and pass a licensing examination. According to PDE, females currently represent 30.6% of the total number of those licensed to be superintendents in the state (PDE, February 2014). This percentage closely mirrors the 28 percent of active superintendents in PA public schools who are female. Because little statistical disparity exists between the percentage of active female superintendents and the labor market of females who are licensed and qualified to serve as superintendents, no

'pattern or practice' of discrimination can be presumed as a matter of law in superintendent hiring (Hazelwood School District et al., Petitioners, v. United States, 1977). In fact, females are fairly represented in proportion to their presence in the qualified state labor pool. But even so, given the presence of a substantially larger proportion of females in other administrative roles, the question remains: why do more females not seek licensure to serve in the role of superintendent of schools and thereby expand the pool of qualified superintendent candidates?

Purpose of the Study

The purpose of this study is to ascertain reasons why more females who currently occupy administrative positions in Pennsylvania school districts do not aspire to the superintendency or at least attain the qualifications necessary to become a part of the pool of qualified applicants. Pennsylvania districts, like those in all other states, have struggled to improve student outcomes as part of the educational reform movement and comply with federal mandates embedded in the No Child Left Behind Act (20 U.S.C. Stat. § 1111, 2001). As a result, they have an interest in ensuring that the pool of superintendent applicants is inclusive of the most capable and talented individuals available to lead their systems and not artificially limited because of actual or perceived barriers that would discourage females from preparing and applying for the superintendency. Gaining a better understanding of why those females already exercising leadership roles in education are not considering the superintendency may allow districts to remove obstacles or address misperceptions about their existence, thereby enriching the human capital on which they may draw.

Research Questions

The research questions addressed in this study:

1. At what rate do current female principals aspire to the superintendency in Western Pennsylvania?

2. What barriers and taxonomy of barriers do female principals perceive as most formidable in advancing to the superintendency?

3. Do the barriers or taxonomy of barriers differ based on the principal's age, family status, years of experience, school type, school size, district size, community type?

4. Do the perceived barriers or taxonomy of barriers differ among those female principals that have applied or intend to apply for the superintendency in the future and those that do not?

5. Are there differences in the rate with which female principals seek or intend to seek the superintendency associated with their age, family status, years of experience, school type, school size, district size, community type?

Significance of the Study

This dissertation research differs from a number of other studies of barriers to the superintendency in a number of regards, including the population studied, the methods used, and the particular lens employed, among others. While the vast majority of the literature written on the lack of female superintendents in the United States, focus on active and/or previous female superintendents (Brunner, 1994; Brunner, 2000; Glass, 1992; Glass, 2000; Grogan, 1994; Sharp, Malone, Walter, & Supley, 2004; Skrla et al., 2000), the respondents for this study are local building administrators – the population from which most aspirants to the superintendency can reasonably be expected to come in the vast majority of districts. These other studies have been from the perspective of what barriers have current female superintendents experienced on their path to the superintendency.

For example, Skrla et al. (2000) researched three previous female superintendents that had left public education within the last two years. The research was conducted using qualitative methodology and an activist philosophy regarding discrimination, sexism and gender inequity. The authors revealed that exclusionary barriers were experienced by their subjects in two taxonomies, sociocultural, which is comprised of barriers relating to sex-stereotyping, sex-discrimination; and structural barriers, which are comprised of barriers such as informal power structures, networking and mentoring. Both the sociocultural and structural barriers are external barriers experienced by the individual seeking the superintendency. These external barriers are both created and maintained by forces within the educational system or society at large. Lastly, Skrla et al. (2000) discovered that the study participants had kept silent about issues related to gender while they were superintendents.

Sharp et al. (2004), studied a larger group of active female superintendents from a three state area using survey research. The females in the states of Illinois, Indiana and Texas were provided a questionnaire to complete addressing perceived discrimination, networking, mentorship and university preparation programs, and barriers to the superintendency. This research, unlike prior studies, inquired about self-induced barriers, such as family disruption and mobility. Sharp et al. (2004) revealed very little perceived differences between male and female superintendent struggles in the position. However, the questionnaires did allude to a group of internal barriers created and maintained by the individuals seeking the superintendency. When female superintendents were asked if men were more mobile than women in seeking a superintendent's position, 74.4 % agreed/strongly agreed with that statement, additionally, 51.3% of the participants said

that they may not seek a superintendent position because they did not want to spend time away from home (Sharp et al., 2004).

Rose Mary Newton (2006) conducted research that also studied underrepresentation of females in the superintendency. Similar to the studies of Skrla et al. (2000) and Sharp et al. (2004), both external and internal taxonomies for underrepresentation of females as superintendent of schools was evident in the literature. However, Newton (2006) studied hypothetical recruitment messages presented to school principals. The independent variables for Newton's (2006) research were gender, major roles of the superintendent's job, and district size. The dependent variables for this study were, "(a) How would you rate the overall attractiveness of the job of superintendent described (b) How likely would you be to pursue the job of superintendent described and (c) How likely would you be to pursue the job of superintendent if offered" (p. 562). While Newton's (2006) research involved school principals, as this study will, it investigated whether superintendent recruitment messages were normalized to a male perspective. By contrast, this research will be investigating what barriers female principals may experience or perceive that dissuade them from aspiring to the superintendency.

Thomas Wiggins and Catherine Coggins (1986) suggest school boards are not the cause of underrepresentation of females in the superintendency as compared to female representation in other professional, administrative and supervisory positions. Wiggins and Coggins (1986) conducted a small-scale study entitled *Gender Bias in Superintendent Selection: A Projective Analysis* attempting to find gender bias in superintendent hiring by school board members. The study asked the research question;

are school board members inclined to favor male archetypes as superintendent in selection processes? To research this question, Wiggins and Coggins (1986) mailed surveys to 43 individual, stratified, randomly selected school board members from 15 individual school districts located in central Oklahoma. School districts were stratified into three categories: small, medium and large. The survey included six candidate resumes; these resumes were to represent a group of candidates for a hypothetical superintendent of schools position.

Participants were asked to rank the aspirants for superintendent. The scale scheme allows respondents to rank the candidates from most to least desirable, with a neutral category. The scale scheme was based on the work of Friedenberg (1967). According to Wiggins and Coggins (1986) "it is a forced-choice projective analysis in which the participant ranks candidates with similar, if not identical, resumes, thus forcing the variable of gender to the surface" (p. 116). Wiggins and Coggins (1986), controlled for variance in the resumes by both pilot testing the resumes for realism with a group of educational administration students from the University of Oklahoma and creating a blind reversal of resumes. The blind reversal of the resumes was created whereby the female resumes in Group A became the male resumes in Group B and vice-versa. This blind reversal ensured interchangeability of resumes, controlled for variance in the resumes other than gender, and was built into the methodology of the study.

A one-way analysis of variance (ANOVA), using repeated measures, was conducted on the data collected using the hypothesis that no difference exists between male and female candidates preferred by school board members for the position of school superintendents by Wiggins and Coggins (1986). The null hypothesis in this study was

not rejected at the alpha level .05, thereby indicated the results of the data collection and ANOVA showed no significant difference between the male and female candidate resumes preferred by school board members in selecting superintendents when isolated for gender. As previously mentioned, the Wiggins and Coggins (1986) study demonstrates that the underrepresentation of females in the superintendency is not due to barriers propagated by school board selection, but rather may be reflective of labor market parity between the number of females certified as superintendent and number of current superintendents within Pennsylvania.

Most similar to this dissertation research in focus is the work of Derrington and Sharratt (1993 and 2009). They studied barriers to the "desire or ability to seek the top district leadership position" (2009, p. 9) drawing on a population of female subscribers to a state administrative organization's job listing service. Their study focused on which barriers experienced by females in this mixed population of superintendents and potentially aspiring superintendents were most evident at two points in time. They first surveyed female subscribers to the Washington Association of School Administrator (Washington State) job listing service in 1993. The 1993 survey (Derrington & Sharratt, 1993) was sent to approximately 200 female subscribers, with a completion rate of 80%. A second study in 2007 surveyed approximately 140 female subscribers, with a completion rate of 67% (Derrington & Sharratt, 2009).

Derrington and Sharratt (2009) found a shift in perceived barriers to females obtaining a superintendency had taken place between the 1993 and 2007 study. In 1993, the perceived barriers were focused in the structural and sociocultural spheres, such as sex role stereotypes, sex discrimination and lack of role models and mentors. Again,

using the same instrument as the 1993 study, the 2007 study found intrapersonal barriers or "self-imposed" ones were most often cited by respondents as barriers to the superintendency.

Margret Grogan (1994), studied 27 superintendent aspirants in the state of Washington. Grogan used a qualitative methodology to discuss four categories with the superintendent aspirants. These included their: "(1) academic and professional preparation for the superintendency; (2) their work environment (3) discourse at home such as mothering, partnering, and homemaking; and (4) alternative approaches to leadership" (p. 13). The focus of Grogan's (1994) study was to determine to "what extent have traditional views of leadership hampered women in their aspirations" (p. 6). Grogan (1994) found: 1) both men and women can and do possess female poststructuralist approaches to leadership; 2) women's personal and professional lives are highly intertwined and have a direct effect on their aspirations to the superintendency; 3) gender is a factor in female preparation for the superintendency; 4) the women use varied approaches to meet both personal and professional aspirations; and 5) women worked through experienced barriers to remain focused on meeting their goals.

This research varies from a number of the above studies in several ways while building on others and extending them in meaningful ways. One way is the population studied in this dissertation is different from that in most of the other studies. The focus population will not be female superintendents or even self-identified female superintendent aspirants, rather, the study will focus on the larger population from which future superintendents will most likely be drawn – female building-level principals. In this regard, the results are more likely to be valid and reliable. This population will also

allow for analysis of differences in barriers between current building principals who have already pursued or indicated their intent to pursue the superintendency and those who express no interest in the superintendency, something that previous studies have lacked the ability to do.

Similar to some prior studies, survey research methodology will be employed (Derrington & Sharratt, 2009; Glass, 1992, 2000; Sharp et al., 2004), allowing for substantially more perspectives and reliability than the studies relying on interviews or focus group research methods (Brunner, 1997, 2000; Grogan, 1994; Skrla et al., 2000). Furthermore, the study will explore multiple categories of potential barriers, more than some other studies (Dana & Bourisaw, 2006; Garn & Brown, 2008), and all that are assessed in the currently leading studies in the field (Brunner, 2000; Grogan, 1996). Finally, in addition to reporting descriptive statistics in terms of the frequency or barriers or their relative ranking order as has been done in the majority of those studies previously referenced e.g., Derrington and Sharratt, 2009; Sharp et al. 2004, this study will attempt to correlate barriers with certain individual and organizational demographic characteristics associated with the respondents.

By exploring the perceived barriers to females in aspiring to the superintendent position using the causations for female underrepresentation reviewed in the literature, the findings in this study may serve to increase the knowledge base of why females are underrepresented in the superintendency and the labor market of superintendent aspirants.

Definitions

- Androcentric bias – "occurs when male experience is treated as the norm, whereas female realities are not considered or are relegated to the abnormal" (Epp, Sackney, and Kustaski, 1994, p. 451)
- Barriers – All negatively perceived or experienced incidents that influences an individual's reaction.
- Intermediate units - Established in 1970 to provide consultative, advisory and educational services to school districts on a regular basis. The General Assembly created IUs, as successors to the county boards of school directors with a network of 29 IUs serving all 500 school districts in Pennsylvania.
- Intrapersonal factors – Factors attributable to the women themselves (i.e., purpose of career, disinterest in fiscal management, and personal or family reasons that may dissuade them from pursuing the superintendency. Sharp et al. (2004) refers to these reasons as the "psychological framework for explaining the persisting gender segregation" (p. 23).
- Principal – Certified building level leader that manages the day-to-day operations of a school building. These building leaders oversee faculty and staff, making decisions that impact the educational and instructional climate of the school building.
- Sociocultural factors – Factors such as perceptions of leadership styles, sex role stereotyping, sex discrimination and bias of school board members, as well as broader societal-held androcentric bias (Skrla et al., 2000; Sharp et al., 2004).

- Structural factors – Factors focused on how school districts as organizations are structured or the normative practices that prevail which may disadvantage or discourage females (i.e., the administrative line of experience, candidate preparation, the lack of mentoring, and the fashioning of the role of the superintendent, all of which may benefit male candidates and pose barriers for non-white and non-male candidates (Skrla et al., 2000; Sharp et al., 2004).
- Superintendent – Chief executive officer of the school district overseeing and administering the school district's day-to-day business, educational and personnel operations in accordance with general policies and strategic guidance adopted by the school board. Excluded for this study are assistant superintendent, deputy superintendent, vice superintendent, or similarly named central office personnel.
- Taxonomy – a classification of similar or related barriers.

Limitations and Delimitations

The limitations on this study will be the membership list(s) used to contact all female principals in Western Pennsylvania. Because building principalships can be a somewhat fluid position, accurate listings, disaggregated by gender may be inaccurate or incomplete.

Additionally, the delimitations for this study are that the research will be confined to the intermediate units either sharing a border with Ohio or include part of Allegheny County, PA (IU 1, 2, 3, 4, 5, and 27). Because other states in the United States may have varying labor market demographics, male versus female certified principals, in comparison to Pennsylvania, this study can only represent Western Pennsylvania. An

additional delimitation to the research is that only public school data will be used to determine findings. No private or parochial school administrators will be used in the data collection or discussion of labor market pools, therefore private or parochial schools cannot be generalized to the findings of this research.

This research will use a methodology that relies on the survey model disseminated to all female principals throughout the six most westerly intermediate units in Pennsylvania. The regions included in the study will incorporate demographics from both large and small school districts, wealthy and non-wealthy school districts and rural, suburban and urban school districts.

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

Much of the historical and contemporary literature regarding women and the superintendency has focused on the underrepresentation of females at the leadership apex of public school districts and has advocated for greater parity in male-female occupants of this role (Shakeshaft, 1987; Brunner, 1997; Brunner & Peyton-Caire, 2000; Glass, 2000; Dana & Bourisaw, 2006; Mertz, 2006; Garn & Brown, 2008). Increasingly common, however, is literature that attempts to explain why women are underrepresented in the role of superintendent of schools, leading to several theories emphasizing one or a combination of structural, intrapersonal or sociocultural explanations (Tallerico & Burstyn, 1996; Derrington & Sharratt, 2009; Skrla et al., 2000). Females are represented in Pennsylvania superintendencies today in rough proportion to their presence in the labor market of qualified candidates – those individuals holding the superintendent letter of eligibility. Over 2,600 of the approximately 8,500 active educators holding the letter of eligibility or 31% are females (Pennsylvania Department of Education, 2014), while females account for approximately 28% of the 502 superintendents in the state (Pennsylvania Department of Education, 2014). Yet because females represent the majority of not only professional educators, but those holding administrative roles in the schools generally, explanations as to why there is not greater gender parity between those holding the superintendent letter or eligibility, and in turn in the superintendency, remains an important question. Explicitly, what might explain why female administrators fail to or are discouraged from preparing for the superintendency.

Thomas Glass (2000), a leading authority on the superintendency, lists seven reasons why women are underrepresented in the position of superintendent of schools in his article, *Where are All the Women Superintendents?* Combining Glass' work with other related literature, ten explanations for the underrepresentation of females in the superintendency became evident: 1) line of experience (Glass, 2000), 2) candidate preparation (Shakeshaft, 1987; Glass, 2000; Dana & Bourisaw, 2006), 3) disinterest in fiscal management (Glass, 2000), 4) personal reasons (Glass, 2000; Derrington & Sharratt, 2009), 5) purpose of their career (Glass, 2000), 6) lack of mentoring (Kamler, 2006), 7) sex role stereotyping (Brunner, 2000; Derrington & Sharratt, 2009), 8) sex discrimination (Shakeshaft, 1987; Derrington & Sharratt, 2009; Dana & Bourisaw, 2006), 9) leadership style (Brunner, 1998; Brunner, 2000; Dana & Bourisaw, 2006) and 10) school board bias (Glass, 2000).

These ten explanations for female underrepresentation can be grouped into three taxonomies based on the work of Skrla et al. (2000) and Sharp et al. (2004). The taxonomies, described within Skrla et al. (2000) and Sharp et al. (2004) pose structural, sociocultural, and intrapersonal explanations or causations for the underrepresentation of women as superintendent of schools. We use these taxonomies or theories to organize this chapter and the literature review.

The first section reviews structural causations that may limit or discourage female pursuit of the letter of eligibility and the superintendency. These explanations tend to focus on how school districts as organizations are structured or the normative practices that prevail which may disadvantage or discourage females, i.e., the administrative line of experience, candidate preparation, the lack of mentoring, and the expected of the role of

the superintendent, all of which may benefit male candidates and pose barriers for non-white and non-male candidates (Skrla et al., 2000; Sharp et al., 2004). Section two of this literature review explores sociocultural explanations or causation for the relative lack of females with letters of eligibility or in the superintendency. These include factors such as perceptions of leadership styles, sex role stereotyping, sex discrimination and bias of school board members, as well as broader societal-held androcentric bias associated with this leadership position (Skrla et al., 2000; Sharp et al., 2004). The third section in this chapter investigates the literature evaluating the existence of intrapersonal causations – explanations attributable to the women themselves (i.e., purpose of career, disinterest in fiscal management, and personal or family reasons that may dissuade them from pursuing the superintendency. Sharp et al. (2004) refers to these reasons as the "psychological framework for explaining the persisting gender segregation" (p. 23). A summary of theories and explanations follows each section.

Structural Causation

Tallerico and Burstyn (1996) describe structural causation as the model that "explains men's and women's differential career aspirations and achievements not as a function of different psychological predispositions but as an effect of the limited opportunities for women that accompany systemic gender bias. This perspective turns our attention away from the individual to the educational system itself, with its complex institutional structures, policies, and practices" (p. 644). One structural feature that serves to limit female access to the superintendency is the perceived importance for a potential superintendent to have an administrative line of experience through the high school principalship (Sharp et al., 2004; Meier & Wilkins, 2002; Kim & Brunner, 2009;

Tallerico, 2000; Glass, 2000). Tallerico (2000) explains that the gates for gaining access to the superintendency "are typically open the widest for candidates with prior experience as superintendents, assistant superintendents or high school principals. The gates are more likely to be closed, or opened only partially, to applicants whose experience consists primarily of elementary principalships and other educational administrative roles" (p. 29). Unfortunately, elementary principalship and other educational administrative roles are the positions where females are most prevalent compared to males.

An experiential job requirement for superintendent candidates to have held the high school principalship may create an internal structural barrier to a majority of the potential female candidates for superintendent of schools since while females represent 83% of elementary teachers and 54.6 % of elementary administrators, they account for only 56% of high school teachers and 30.8% of secondary principals (Pennsylvania Department of Education, 2014). Sharp et al. (2004) defines internal structural and systemic barriers as "conceptualized around the notion of the effect of limited opportunities for women", and "the focus of these perspectives is on the educational system itself, not the individual" (p. 23). A list of administrative options available to these female elementary teachers includes elementary principal or assistant principal, director of special education, curriculum director, or even director of personnel. However, if misdirected emphasis is placed on the high school principalship, those elementary teachers' firsthand knowledge related to teaching students, directing operations and staffing of a building (as well as community collaboration and

communication) can be deemed irrelevant or inadequate by the system that hires superintendent of schools.

Another structural barrier flows from the normative line of experience expectation. It serves to diminish the number of role models for female teachers and administrators entering the educational profession who may aspire to the superintendency in the future. A paucity of female role models also reduces the availability of mentoring by individuals sensitive to the strategies for female advancement in predominately male-led fields and in turn limits the networking opportunities for women. By contrast, "the old boys' network, a well-documented informal constellation of prominent white males, has been credited for perpetuating like members into positions of power and influence" (Kamler, 2006, p. 299). The old boys' network is not only perceived in education, but can be identified in any organization or group where power and influence are able to be gained through membership. Thus the old boys' network represents a potential external barrier to the superintendency, a barrier that is not self-imposed but one established by forces beyond an individual's control.

An undervaluing of female credentials and performance is observed in the private sector as well. According to Elacqua et al. (2009) "Women managers who are promoted tend to have received higher performance ratings prior to their promotions than their male counterparts have, suggesting that women must perform better than men to receive a promotion. In addition, women managers' promotions are more closely tied to their job performance than are men's" (p. 287). Companies that do not have explicit performance measures and criteria tend to have employees that believe men and women are treated differently. These subjective performance ratings allow an old boys' network or "being

friends with the decisions makers in the organization" (p. 286), to become an important factor in how employees view promotions. That being said, according to McCord, Jordan & Jordan (2008), 59% of 2,110 surveyed superintendents felt mentoring/coaching programs were very important for aspiring superintendents, while another 38% felt mentoring/coaching programs were moderately important for aspiring superintendents.

The unfortunate consequence of poor mentoring and networking opportunities for women is the unspecified number of formerly aspiring administrators who have either lost interest in administration or been discouraged by structural barriers that seem insurmountable, thereby depriving the educational system of potentially new and innovative leaders within the administrative ranks including superintendent of schools. These "lost" administrators can be equated with the "discouraged worker" in economics. For economists Pindyck and Rubinfeld (1989), the discouraged worker is one who is eligible (able and willing) to work but has not been able to secure work for an extended period. Therefore, this worker is not currently attempting to gain employment due to a lack of success. Unfortunately, these discouraged workers are not used in economic unemployment calculations. Similarly, "lost" aspiring administrators, particularly women, are not numbered among the employed superintendents, nor may they have attained their superintendent letter of eligibility. This may be due to a lack of success they have experienced because of internal barriers or discouragement from applying for administrative positions related to a lack of mentoring and networking opportunities.

An additional structural or externally-imposed hindrance to females gaining the superintendency is the absence of treatment of gender as an issue in post-secondary administrative preparation programs. According to Sharp et al. (2004), 71.3% of the 118

superintendents interviewed in the state of Illinois, Indiana, and Texas indicated gender issues had never been discussed in their university administrative preparation programs. Likewise, Skrla et al. (2000) found a lack of preparation on gender differences, including leadership style differences, in management programs and superintendent preparation programs. This lack of candidate preparation leads to an unawareness of issues related to potential gender differences and bias that female administrators may encounter in their professional careers, which in turn may hamper their ascendancy to the superintendency. Likewise, Charol Shakeshaft (1987) found "a not-so-subtle barrier for women graduate students in educational administration is the instructional material they must read" (p. 111). According to Shakeshaft (1987) several studies have indicated the "shocking proportion of sexist content in the research and writings" (p. 111) that graduate students in educational administration must read. "A number of researchers have commented upon the relationship between sexist curriculum materials and the damped career goals of women" (Shakeshaft, 1987, p.111). Therefore, potential bias in educational training programs for administrators may be a barrier to female teachers' aspirations to becoming school leaders. These limiting opportunities for women to demonstrate leadership abilities may help to promote a continued underrepresentation of women in educational administration.

As previously noted, limiting the number of female teacher-leaders and administrators effectually may limit the number of female candidates for superintendents of school. Limiting the number of female applicants may help ensure a highly male dominate applicant pool. Even slightly limiting the number of females to males in a pool of candidates has large effects as those individuals move up the organizational ladder.

"For example, a bias in which women receive 48.2% of the promotions at each step results in only 41.9% women after a sequence of four such promotion steps" (Elacqua et al., 2009). By reducing the pool of candidates, fewer females have the opportunity to apply for superintendent positions.

The role of the board of education in superintendent selection represents another structural factor in that lay board members have the exclusive authority to appoint superintendents (24 P.S. § 10-1071) as contrasted to other administrators who are recommended and effectively selected by educational professionals in the personage of the superintendent of schools (24 P.S. § 5-508). The significance of this difference in structure results from the variation in knowledge of lay board members v. professional educators regarding anti-discrimination laws affecting employment.

According to Mertz (2006), school boards, though legally obligated, do not consider the same legal parameters in the interviewing and hiring processes as a superintendent does when hiring other employees, the superintendent being familiar with laws barring discrimination such as Title IX of the Educational Amendments of 1972 and Title VII of the 1964 Civil Right Act (1964). Mertz concludes that the difference between the superintendent position and all other administrative positions is solely the individual making the recommendation in the hiring process. "Differences between the superintendency and other positions rest on differences in how individuals come to the position, that is, in who controls entry" (p. 553) and "superintendents are chosen by school boards, which have both initiatory and approval authority over the hiring process for that position. De facto, this sets the position of superintendent apart from other

administrative positions" (p. 553) for which recommendatory authority rests with professionals more knowledgeable of the law.

Use of an outside consultant or headhunter by the board of directors to assist in the hiring process should help in the elimination of gender bias in the selection of a superintendent. Outside consultants often assist in the following portions of the hiring process: writing of a job description, writing and dissemination of advertisement of the position, screening of applications, and determining if candidates have met qualification criteria set forth by the board of directors. Again, the outside consultant's duties closely mirror those of a superintendent's conducting other line administrative hiring including awareness and understanding of governing legal statutes within the hiring process. While the board of directors would still need to conduct face-to-face interviews of candidates, where bias could creep into the process for recommendation to the full board, at least the candidates selected for interviews would be representative of all qualified candidates and free from initial gender discrimination.

Tallerico (2000), however, points to inherent gender bias within these consultant organizations as well. The search and selection process can also be wrought with discrimination, even if conducted by an outside consultant. "This study found that narrow constructions of ideal prior experience often determine which applicants advance beyond the gates of consultants' initial screenings on behalf of the school boards" (Tallerico, 2000, p. 29). Additionally, Tallerico (2000) found "school board members' and consultants' behind-the-scenes definitions of candidate quality rely more on hierarchies of prior job titles than on particular leadership skills" (p.29). Since hiring practices based solely on experience of candidates in selected line administration positions such as

secondary principalships is shown to be a gender discriminator, the use of an outside consultant or headhunter as a hiring practice may be no less biased.

Mertz (2006) states that "differences in the way in which superintendents are chosen bode ill for changing this situation in the immediate future" (p. 555) when comparing the resistance of gender equity in the superintendency to other line administrative jobs. This conclusion by Mertz (2006), however, is in conflict with research data provided by Thomas Wiggins and Catherine Coggins (1986). Wiggins and Coggins (1986) state that "the results of the one-way analysis of variance (ANOVA) with repeated measures showed that there is no significant difference in the choices between male and female candidates made by school board members in selecting superintendents" (p. 117). The Wiggins and Coggins (1986) survey included six candidate resumes; these resumes were to represent a group of candidates for a hypothetical superintendent of schools position. A blind reversal of the resumes was created whereby the female resumes in Group A became the male resumes in Group B and vice-versa. This blind reversal ensured interchangeability of resumes, controlled for variance in the resumes other than gender, and was built into the methodology of the study. By creating "similar candidate resumes in training, experience, professional affiliations, and publications" (p. 116), the study was isolating "the variable of gender" (p. 116) as the only significant variable being analyzed.

In reviewing the specific resumes chosen as the top three potential candidates, resume #6, was the top candidate, resume #5 was the second most chosen candidate, and resume #1 was the third most chosen candidate. Interestingly, the rankings were identical regardless of the gender associated with the resumes. These results lead Wiggins and

Coggins (1986) to the result of no statistical difference in the selection of male and female candidates by school board members. However, a close review of the study showed that while all six of the study's resumes held terminal degrees, the top two most chosen resumes (#6 and #5) had earned a Ph. D. versus an Ed. D. Additionally, the top three chosen resumes had held a position of assistant superintendent prior to holding a position of superintendent, whereas only one of the bottom three chosen resumes had held a position of assistant superintendent prior to holding a position of superintendent. The fact that candidate resumes had specific "similar" work histories and other structural factors ascribed to them by Wiggins and Coggins (1986), does not rule out the contributing influence these slight structural variables may have had on their selection by study participants.

Structural explanations, of course, are not the only potential causes for female underrepresentation reflected in the literature. As can be reviewed in the Wiggins and Coggins (1986) study, the design of the study was to isolate for gender only and the effects gender had on school board member's candidate selection. Thereby, describing studies suggesting sociocultural causations for female underrepresentation in the superintendency.

Sociocultural Causation

Sociocultural barriers experienced by women aspiring to the superintendency are best defined by Marilyn Tallerico and Joan Burstyn (1996) as "explanations not in women as individuals nor in educational systems, per se, but in society as a whole" (p. 644). Of the factors that may contribute to the underrepresentation of women in the superintendency, one is the alternative leadership styles used by women. According to an

article published October 5, 2005 for knowledge@Wharton entitled *The 'Masculine' and 'Feminine' Sides of Leadership and Culture: Perception vs. Reality* a list of styles associated with female leaders, created by female executives included: multi-tasking, emotional, empathetic, strong, intuitive, compassionate, relationship building, verbal, consensus building, collaborative, and gossipy. This list was contrary to the list created for male leaders: Strong, arrogant, intelligent, ego-driven, bravado, powerful, dominant, assertive, single tasking, focused, competitive, stubborn, physical, self-righteous, and direct. While the article compares the perceptions and realities of male and female leaders, these lists are examples of differing perceptions of male and female leaders among a group of female executives.

According to Grogan (1994), leadership styles used by women are not viewed as effective as those leadership approaches and styles used by men within the same setting. This bias has created the male dominated position of superintendent of schools, according to Epp, Sackney, & Kustaski (1994). This bias is referred to as androcentric bias or bias focused on the male perspective, and presumes that male actions are the norm and thereby the only appropriate actions within society. The androcentric bias currently used to define effective leadership characteristics of a school superintendent must be reevaluated to include the feminist leadership approaches of women. Female approaches to leadership have been proven effective and should not be dismissed when considering candidates for superintendent of schools (Grogan, 1994).

The absence of women in the studies about the superintendency further reinforces the androcentric bias theory. Research on effective leadership styles has been studied under the guise of male dominated views and subjects, thereby creating very little data

specific to female leadership styles or dismissing those leadership styles as ineffective. This prevents the leadership styles of women to be viewed as successful. The phenomenon of androcentric bias in research is not unique to Pennsylvania or the United States in general. In describing gender bias in Canada, Crabb (1996) states,

> Specific problem (sic) with some previous research has been the lack of opportunity to interview or include women in the study or questionnaire. An example was a study done by Janice Grow Maienze (1989) on characteristics of superintendents. Even including all available female superintendents did not allow for compilation of complete data. (p.7)

Based on this bias, leadership styles exhibited by males are then viewed as most appropriate, effective, efficient and most necessary for the role of superintendent. When women do break through the "glass ceiling" and attain a leadership position, they must either conform to traditional male leadership styles or feel pressure from supervisors and peers. Grogan (1994) explains, "As non-traditional leaders, the participants have had a variety of experiences that have not always been valued by their peers or their supervisors" (p. 28). That supervisors and peers devalue the female leadership style, surmising that those being led would either inherently agree with or model the bias of others within the system, is not a leap of faith. Bias against women is not solely viewed in the position of superintendent of schools. It can be viewed across all line administrative positions in education (Crabb, 1996). Gender bias in other administrative roles thereby affects the pool of potential candidates for the position of superintendent.

Androcentric bias, sex stereotyping and sex discrimination are closely related barriers to females becoming superintendents of schools. Androcentric bias focuses on the male perspective and presumes that male actions are the norm and thereby the only appropriate actions within society (Shakeshaft, 1987; Brunner, 2000; Grogan, 1994). Androcentric bias can be an unintended or intentional action engaged in by an individual, and is a reaction to the learned norms of a person's environment or society to which they have been exposed. The intended or unintended norming of male actions by androcentric bias effectually discredits, dismisses or negates alternative non-male actions within the same societal setting. The disenfranchisement of alternative non-male actions, models and propagates the biased concept that non-male actions are either negative, incorrect or not influential enough to be considered (nonexistent) to all other members within the society. Sex stereotyping and sex discrimination focus on the female gender and presume that all female actions are negative or incorrect based solely on the gender of the individual completing or presenting an action. By devaluing the actions of one gender, female in this instance, it effectually elevates the actions of the other gender. So while sex stereotyping and sex discrimination result in a more blatant and explicit female devaluation, they may be equally present in the educational system as the more implicit normalization of male actions of androcentric bias. The studies and research of Shakeshaft (1987), Brunner (2000), Tallerico (2000), Skrla et al. (2000), and Dana & Bourisaw (2006) all found evidence of sex stereotyping and sex discrimination within the educational system. These biases had a direct effect on opportunities for women to be hired as school administrators including school superintendent, regardless if they were intentionally or unintentionally manifested.

To better understand female underrepresentation, Marilyn Tallerico (2000) conducted a qualitative study with the purpose "to better understand superintendent headhunting from a critical, feminist perspective. That is, I sought to explore and analyze current practices in terms of equity for females and people of color" (p. 19). In determining the influence of both gatekeeping theory and career mobility models in the state of New York to access to the superintendency for these groups, Tallerico (2000) conducted a case study with 75 participants. The participants included representatives from "members of each of the key groups closest to search and selection processes, that is, school board members, headhunters, and recent candidates for superintendencies" (p. 23). Tallerico conducted semi-structured interviews, field observations and document analyses over a two-year period. She found that females with positive credentials in the areas of experience, qualifications and aspirations were not always given equal standing with their male counterparts due to structural and sociocultural forces hampering female advancement (Tallerico, 2000).

According to Dana and Bourisaw (2006), sex discrimination and sex stereotyping is a systemic problem and is caused due to a lack of social justice within the educational system. Social justice must manifest itself within the system beginning with the local school district to rid itself of policies and procedures that propagate sex discrimination and stereotyping. Dana and Bourisaw (2006), have gathered 5 years of research that "clearly indicates the strong role that cultural values, sociopolitical practices and gender-structured policy play in determining women's access to and in the public school superintendency" (p. 28). Additionally, according to Dana and Bourisaw (2006), female

leadership styles differ from male leadership styles and can be in direct conflict with a school district's culture, thereby leading to shorter tenure as superintendent.

While Dana and Bourisaw do not define social justice in the context of their article, much can be derived from James Ryan's (2005) view of social justice as it relates to educational leadership. Ryan (2005) states,

> Proponents of emancipatory leadership advocate for a more comprehensive view of inclusion than other theorists. Not only do emancipatory champions (as critical theorists) want educational leadership processes to be inclusive, but they are also committed to working for more global forms of inclusion. They view leadership as only one element of a much wider concern with inclusion. Critical theorists rightly believe that this concern is warranted because our institutions and communities are deeply unfair; some people consistently enjoy advantages at the expense of others. The task for leadership is to get people to recognize these injustices and work together to change them; only then can people become truly emancipated. (p. 56)

For those females who were able to secure the superintendency, in spite of the aforementioned barriers, the concept of sex stereotyping did not subside at the central office door. Skrla et al. (2000) found sex stereotyping of female superintendents continued even once they became superintendent. Many times this stereotyping was propagated by the board of directors that had hired them, by those within the school system and by the community at large. According to Skrla et al. (2000), the interviewees in their study revealed experiences of sex stereotyping from school board and community

members regarding their abilities to oversee building projects, school finances, maintenance departments and supplies as well as other stereotypical male dominated abilities. This stereotyping came from the same boards of directors that hired the female superintendents.

Several of the interviewees within the Skrla et al. (2000) study surmised they were only hired because the board believed they could dictate the actions of a female superintendent. The interviewees also felt stereotyping from the school boards and community members in how they dressed, how they acted and what they said at public and private events. The belief of the interviewees was that the boards and communities would not have demonstrated these same concerns towards dress and actions if they had been male. Even within the educational system where these female superintendents have great educational and experiential credibility, the interviewees in the Skrla et al. (2000) study related several incidents of male administrators indicating to the female superintendent that they could not work for a woman. Are these men demonstrating an individual gender bias towards these female superintendents or are they demonstrating the effects of a systemic gender bias? According to Mertz (2000), organizations have erected sociocultural barriers for women at all levels of leadership thereby giving women the impression that they are not qualified to hold the position of superintendent. According to Mertz (2006), "These 'male notions' continue to dominate conceptions of school leadership and the process by which administrators are chosen and socialized" (p. 556). Therefore, these male administrators may only be demonstrating the sex stereotyping and sex discrimination that the current educational system has and could

continue to model for students about supervisory and subordinate roles within the workplace.

Intrapersonal Causation

Intrapersonal barriers are not a new phenomenon as an explanation for the lack of female career advancement in education, although gaining additional prominence in the literature recently. Intrapersonal causation can be defined as "the persistent and continuing gender segregation in the profession from a psychological orientation. That is, they look to women themselves for the 'cause': personal traits, characteristics, abilities, or qualities. Individual attitudes such as self-image and confidence, motivation, and aspirations also fall into this" (Tallerico & Burstyn, 1996, p. 643). Several of the intrapersonal barriers described as plausible causes for the underrepresentation of women in the superintendency are purpose of career, disinterest in fiscal management, and other personal reasons such as child rearing, inability to relocate, and time away from and management of the family unit. Derrington and Sharratt (2009) recorded this causal shift from structural and sociocultural barriers to intrapersonal barriers in their 2007 survey of nearly 100 women in Washington State. In 1993, Derrington and Sharratt sent a survey questionnaire to 200 female subscribers of the Washington Association of School Administrators professional job listing service. The survey, which enjoyed an 80% response rate, asked the female subscribers to rank barriers to their desires or abilities to seek the superintendency. Fourteen years later Derrington and Sharratt replicated their original study by sending the same survey questionnaire to 140 (67% response rate) subscribers of the Washington Association of School Administrators professional job listing service. The ranking of "*barriers to securing a superintendent position are often*

self-imposed" had been positioned at the bottom of the 1993 survey results with sex role stereotyping and sex discrimination at the top of the list. However, "*barriers to securing a superintendent position are often self-impose"* had become the second highest ranked barrier in the 2007 survey results. This evidences a causal shift in female interpretation of barriers to the position they desire. Because Derrington and Sharratt's (2009) study only surveyed women in Washington State, they sought other research to determine if the causal shift was regional or more widespread. Derrington and Sharratt's (2009) report additional research confirming their results with multiple studies and doctoral dissertations covering six additional states, California (Wickham, 2008), Illinois, Indiana, Texas (Sharp et al., 2004), Oregon, (Parent, 2004), Iowa, (Olsen, 2005) in both city and suburban, Chicago Illinois both city and suburban areas (Loder, 2005) settings (Derrington & Sharratt, 2009). The shift in perceived barriers from structural (lack of mentoring) and sociocultural (sex role stereotyping and sex discrimination) to intrapersonal evidenced in multiple states reflects a change in perception among women about the barriers that confront them as prospective superintendent aspirants.

"Personal reasons" appear to be the most dominant intrapersonal barrier evident in the literature (Glass, 2000; Glass, Bjork, & Brunner, 2000; Dana & Bourisaw 2006; Derrington & Sharratt 2009), perhaps because the term is so general and potentially ambiguous. The more specific of the personal reasons given by women for not seeking or attaining the superintendency has included reasons such as child rearing, inability to relocate, and time away from and management of the family unit. Research conducted by Margret Grogan (2005) found that "the pressures of combining family responsibilities with administrative ones take their toll on marriages and career opportunities" (p. 26). In

our current, media-driven society, pressures felt by women to be a 24-hour woman who 'can bring home the bacon, fry it up in a pan' may lead to intrapersonal feelings by women that contribute to self-imposed barriers on their ability to seek or attain a superintendent position.

Research conducted by Glass, Bjork & Brunner (2000) in *The Study of the American School Superintendency, 2000. A Look at the Superintendent of Education in the New Millennium* and *Where are All the Women Superintendents?* (Glass, 2000) supports the findings of both Grogan (2005) and Derrington and Sharratt (2009). Glass (2000) found personal reasons are significant for the underrepresentation of women in the superintendency and those women who did attain the superintendency did so at a greater age than their male counterparts (Glass, 2000). By entering the superintendency at a greater age, post minor-aged children, the responsibilities of child rearing and family management are significantly reduced, thereby reducing the effect of some intrapersonal barriers. This finding is echoed by Sharp et al. (2004) which states that "domestic relationships may restrain many women from pursuing higher levels of responsibility" (p. 25) and that "parenting issues more than spouse issues" (p. 25) are the restraint. Directly related to the personal reasons women divulge as barriers to the superintendency is that of mobility. Because relocating tends to disrupt the family unit (i.e., spouses employment, school district of residence for the children, and new domicile and neighborhood), the ramifications of relocating a family becomes increasingly difficult on individuals seeking a superintendent position.

Since analyzing thoughts and interpretations is subjective, the question remains whether intrapersonal barriers experienced by female aspirants to the superintendency are

truly self-imposed. Perhaps these perceived self-imposed barriers are a subconscious manifestation of androcentric bias about the position of superintendent of schools. As Newton (2006) states, individuals who are given fewer opportunities often have lower expectations of their abilities and thereby reduce their career advancement goals. Perhaps these intrapersonal barriers can be, in part, explained or connected to the societal and structural interpretation of how a superintendent of schools looks and performs.

Summary

Every causation listed in the literature, including those not specifically discussed in detail in this research, has been or may be a reason why at least one female administrator has decided not to become certified for the position of superintendent of schools or aspire to the superintendency. The potential exposure to multiple barriers (structural, sociocultural, and intrapersonal) that females may experience, or believe to be in place in becoming the chief school administrator, can only perpetuate the potential underrepresentation of female certificated holders. While Banks' (2001) statement that "firm explanations for the underrepresentation (of women in the superintendency) continue to elude us" (p.77) is an accurate reflection of the literature, the intent of this research is to attempt to bring some additional insight to the reasons female administrators do not obtain superintendent certification or aspire to the superintendency.

There is not a definite line between the barrier taxonomies of structural, sociocultural and intrapersonal, rather a ring of concentric or overlapping circles of barriers. The circle of intrapersonal barriers i.e., lack of confidence, low self-image, and lack of motivation or aspiration may be "merely camouflage for deeper societal roadblocks to women's advancement" (Shakeshaft, 1987). Likewise, structural barriers

to females advancing in educational administration such as biased policy and procedure may be a result of an androcentric culture that, according to Shakeshaft (1987), "explains much of the source of inequity in education, deeply imbedded as it is in both social institutions and individuals" (p. 94). This research will not attempt to source all barriers that may be experienced by females in educational administration, rather, this research will attempt to identify those barriers experienced by female principals that may be dissuading them from aspiring to the superintendency.

Again, the literature is conclusive in that barriers of many types and sources may be experienced by females who contemplate aspiring to the superintendency. However, increasing rates of female superintendents in Pennsylvania demonstrates that those obtaining certification and applying for superintendent positions are being hired at a rate roughly equal to or slightly greater than the labor market would predict. Therefore, why are females, who comprise approximately 70% of the educational workforce and approximately half of the administrative positions, failing to obtain the superintendent letter of eligibility or aspire to the superintendency? This study will attempt to gain greater clarity with respect to this question.

CHAPTER 3

METHODOLOGY

Introduction

The purpose of this study is to determine what barriers are experienced by active female principals within Western Pennsylvania that affect their desire to aspire to the superintendency. This study uses a feminist perspective to increase the understanding of why these principals do not aspire to the superintendency. By categorizing barriers experienced by females into taxonomies, the data collected may provide further insight into feminist theories on leadership and administration in education. Because educational leadership requires a diverse set of competencies, as described by AASA, feminist theory would espouse that no one gender or leadership style would encompass all required competencies (Grogan, 1994).

This study is focused on collecting information from female principals. The intent is to increase feminist scholarship by collecting data from the individuals who are entrenched in this public education environment. By dismissing beliefs about traditional leadership and targeting the current population of aspirants, an additional level of information can be obtained concerning the potential reasons why female principals are not aspiring to the position of superintendent.

The data collected provides insight into the types of barriers that are experienced by the participating female principals: structural (Sharp et al., 2004), sociocultural (Shakeshaft, 1987), intrapersonal (Derrington & Sharratt, 2009). This study draws conclusions from the survey data to identify the taxonomy of the most prevalent barriers for current female public school principals within Intermediate Units 1, 2, 3, 4, 5, and 27.

These intermediate units either share a border with Ohio or include part of Allegheny County, PA. Finally, this study draws conclusions from the survey data to identify any potential correlation between principal demographic information, (e.g., size of district, type of building, number of students within the supervised building and principal characteristic information, e.g., years of experience in principalship, age, family status, and intent to seek the superintendency with survey responses) (Glass, Bjork, & Brunner, 2000).

This study employs an electronic survey to collect data from female building principals. Data are analyzed to draw conclusions and results to answer the research questions. Additionally, this chapter includes the research design, research question, sample population, instrumentation, and data collection. Finally, the chapter discusses the data analysis of this study.

Research Questions

The research questions addressed in this study:

1. At what rate do current female principals aspire to the superintendency in Western Pennsylvania?

2. What barriers and taxonomy of barriers do female principals perceive as most formidable in advancing to the superintendency?

3. Do the barriers or taxonomy of barriers differ based on the principal's age, family status, years of experience, school type, school size, district size, community type?

4. Do the perceived barriers or taxonomy of barriers differ among those female principals that have applied or intend to apply for the superintendency in the future and those that do not?

5. Are there differences in the rate with which female principals seek or intend to seek the superintendency associated with their age, family status, years of experience, school type, school size, district size, community type?

Population

This study will be conducted using data collected from active female public school principals within Western Pennsylvania. According to the Pennsylvania Department of Education, during the 2014-2015 school year, females held 1,366 of the 3,099 principalships in Pennsylvania. All female school principals are categorized by the Pennsylvania Department of Education within one of the following three principal categories; Elementary Principal (921), Principal K-12 OR Middle School (198) or Secondary Principal (247). All active female principals in Western PA will receive an invitation to participate in the survey regardless of the building designation. An inclusive participant list was created by using current intermediate unit directories from the six intermediate units. Current male principals and assistant principals were not included in the potential participant email list.

The representation of female principals in the survey area includes 230 female principals broken down as follows: Elementary 166 (72.2%), Middle School 32 (13.9%), and Secondary 32 (13.9%). The percentage breakdown of female principals represented in this study is inconsistent with that of the percentage breakdown of female principals across the state of Pennsylvania. Across the state, the percentage of female principalships were broken down as follows: Elementary 921 (67.4%), Middle School 198 (14.5%), and Secondary 247 (18.1%). The disparity in principalship distribution between the survey area (elementary – 72.2%; high school – 13.9%), as compared to the state (elementary- 67.4%; high school – 18.1%), combined with the insignificant total population of female principals represented within the survey, 230, as compared to the

entire state, 1366, may not allow the study results to be generalized beyond the population studied.

For this study, assistant principals were not contacted to participate in the survey. Assistant principals are being excluded from survey participation because assistant principal positions tend to be entry-level administrative positions within school districts. These entry-level positions often have limited duties and responsibilities within the building, thereby, limiting the assistant principals' exposure to district level initiatives, knowledge of the district organizational structure or limited time within their current district or building. While all of the above limitations may also be true for principals, the duties and responsibilities assigned to building principals are more encompassing, thereby exposing building principals to the building operations and the relationship of building-level staff and administration in regards to district operations. To avoid potentially less accurate or biased survey results, assistant positions are not being asked to participate.

By including all active, public school female principals in Western Pennsylvania, respondents should cover a diverse population of female principals. Using a survey methodology for data collection will allow the researcher to collect data specific to experienced barriers by female principals as well as demographic data including age, family status, experience, school type, school size, district size, and community type. The data collected regarding demographic information will allow the analysis of barriers in conjunction with specific demographic or characteristic identifiers. Lastly, a broad population will allow for better generalization of research results.

Instrumentation

A 33-item questionnaire will be administered via SurveyMonkey including closed ended and a limited number of open-ended questions. Survey questions will use a modified, 5 point, Likert-type scale that will ask the participants to rate potential answers. These forced-choice surveys require respondents to provide an attitudinal direction and magnitude, "Likert scales are widely used to measure attitudes, e.g., opinions, psychic and mental dispositions, preferences" (Gob, McCollin, & Ramalhoto, 2007, p. 601). "Likert scales require individuals to respond to a series of statements" (Croasmun & Ostrom, 2011, p. 19) using a range of responses. While Likert scales have been used in the social sciences since Rensis Likert's creation in 1932, the use of these scales has been greatly proliferated in the fields of marketing and public relations. The expansion of technology has allowed survey software such as SurveyMonkey, eSurveyPro, and SurveyExpressions the ability to access consumer responses via email, phone call, and "pop-up" on an exponential level. This research will ask participants to give an attitude rating to each question with a specific rating scale most suitable to each question.

Of the survey's 33 questions, 10 are dedicated to collecting participant demographic information, seven are dedicated to collecting data related to potential structural barriers (Sharp et al., 2004), seven questions collect data related to potential sociocultural (Shakeshaft, 1987) and seven questions collect data related to potential intrapersonal (Derrington & Sharratt, 2009) barriers female administrators may encounter dissuading them from aspiring to the superintendency. Additionally, participants will be asked to provide responses to two open-end questions included in the survey. In addition to the stated purpose of this study, why female administrators do not aspire to the

superintendency in Western Pennsylvania, the 10 questions dedicated to collecting participant demographic information and open-ended response will allow the analysis of the relationship or correlation between barriers and barrier taxonomies and the age, family status, experience, certification, education level, school and community type of the respondents. This may suggest potential causes for the lack of more female superintendents in Western Pennsylvania.

The survey instrument used to conduct this research will be piloted using three former female principals in Mercer County, Pennsylvania. Because the survey used in this study is an original survey versus a previously used instrument, piloting the study will aid in determining the validity and reliability of the survey questions and choice responses.

Design of the Study

A cross-sectional design employing descriptive statistics, univariate and bivariate analysis was used for this study. This design is the most commonly used in studies focusing on female superintendents or female access to the superintendency (Kowalski et al., 2011; Kim & Brunner, 2009; Sharp et al., 2004; Wiggins & Coggins, 1986). The survey will be completed by participants using online survey software. Survey invitations eliciting their participation will be emailed to the 230 female building principals in the survey area 2 days prior to the distribution of the survey. Next the survey will be distributed and remain open for completion for a two-week period (14 days). Principals will receive two additional email reminders to participate, one after 5 days form the initial distribution and another at 10 days. Lastly, participants will receive a thank you email at the conclusion of the two-week completion period for their

participation. Those requesting a summary of the study's findings will be provided a brief synopsis after its completion.

Using an online survey will broaden the number and geographic area of potential participants to the research in comparison to employing a focus group or interview methodology. Use of technology, email, to distribute the survey will allow quick delivery to participants and compilation of survey results to the researcher. Additionally, an electronic survey will reduce researcher bias in the data collection process, as the researcher will have no direct contact with survey participants and limited communication regarding the survey.

The instrument, Appendix D, will ask participants to complete the survey using the online survey software provided via a hyperlink embedded with the email. The research instrument and informed consent statement for the study have been reviewed and approved by the Human Subjects Institutional Review Board at Youngstown State University. Questions related to each taxonomy – structural, sociocultural and intrapersonal– will be randomized within questions 1-21. Questions 22-31 will ask the participants to provide demographic information about themselves, their school building, or school district. These data regarding the participants and their employment environment will help in identifying relationships that may exist with certain barriers or category of barriers. Participants will be asked, but not required, to answer the open-ended questions 32 and 33. The potential relationship between participant demographics and survey responses to other questions will be calculated using Statistical Packages for the Social Sciences Version 20 (SPSS) software.

Data Collection

The data will be collected using the survey instrument described previously. Survey responses from female building principals will be collected using the software, SurveyMonkey. Survey responses will be collected anonymously. The anonymity of the survey results will allow the participants to complete the survey without concern for any risk since the researcher will not be able to link the responses to any individual. Because the survey will be distributed electronically via a hyperlink, respondents will choose answers using radio button selections within the survey with the exception of the optional open-ended response. The survey is expected to take less than 15 minutes to complete and will be immediately collected and coded via the survey software.

Data Analysis

The data collected regarding barriers perceived by female principals will be analyzed using several methods. First descriptive statistics will be reported for the individual barriers that are perceived by the respondents. Charts using mean scores and frequency counts will be computed for each barrier. Mean scores will also be computed for each barrier taxonomy, allowing comparisons among and between the types of perceived barriers previously reported in the literature. Frequency distribution charts present data in a summarized format allowing for inspection of data distribution and normality.

Additionally, comparison of means testing were used in data analysis. Comparison of means were assessed using either a one-way analysis of variance (ANOVA) or independent samples *t* test. A one-way ANOVA is used to determine if any statistically significant difference in mean exist between three or more unrelated groups.

Any statistically significant results were further analyzed using post hoc analysis employing Bonferroni's procedure. Post hoc analysis was necessary because ANOVAs testing is an omnibus test and can only indicate that at least two of the unrelated groups are significantly different, but not specifically which groups were different. Post hoc analysis allows for this granular determination. All ANOVA tests were analyzed at a significance level of .10 alpha, $p<.10$ (Fraenkel and Wallen, 1996).

The other comparison of means testing conducted in this study was the independent samples *t* test. Independent samples *t* test were also used to determine statistically significant differences in means at the .10 alpha level, $p<.10$, between two unrelated groups. A Levene's test for equality of variance was conducted with independent samples *t* tests to determine equality of variance between the two unrelated groups. If an equality of variance was not assumed based on the Levene's test, type I error may be present and the equal variance not assumed significance (p value) was reported (Fraenkel and Wallen, 1996).

Correlational analysis was conducted on the survey data to determine the relation between aspiration to the superintendency and demographic characteristic. A Pearson's chi-squared test will be conducted to measure for any dependence between respondent demographic characteristics and likelihood to apply to the superintendency in the future. Lastly, a qualitative methodology was used to analyze open-ended responses employing pattern or thematic analysis.

By applying statistical measures to answer the five research questions, this study will determine the rate at which female principals in the survey area aspire to the superintendency, compare barrier frequency and strength between females principals,

assess differences in means between participants varying demographic characteristics i.e., age, family status, years of experience, school type, school size, district size, community type and perceived barrier and lastly, determine the most likely demographic characteristics of female superintendent aspirants in the survey area. The study thus may provide possible reasons for why more female principals do not aspire to the superintendency and in turn what steps may need to be taken to decrease perceived barriers. The following assumptions about the data will be made: 1. Variables are normally distributed, means and medians are fairly equal in value; 2. The groups compared are independent of one another; and 3. Reliability of measured variables is sufficient. Ensuring the data has met the above assumptions will increase the validity or trustworthy of the analysis (Osborne and Waters, 2002).

To guide the correlational analysis, several expectation are posited. They include the following:

1. Female principals will identify barriers across all three taxonomies; however, intrapersonal will be the most significant set of reported barriers to the superintendency (Glass, 2000; Derrington & Sharratt, 2009).

2. With the enactment of *No Child Left Behind* (NCLB) legislation in 2001 and accountability systems based on student achievement, knowledge of curriculum and instruction has grown in importance in education (Grogan, 2005), potentially elevating the importance of roles other than the secondary principal in the pathway to the superintendency. Therefore it is anticipated that some structural barriers may be less evident among those perceived by females than previously reported in the literature.

3. As structural barriers are lessened or female attributes emphasized, perceived sociocultural causations should be reduced in these taxonomies. For example, getting females into doctoral and superintendent certification programs will reduce the supposition that no female candidates are qualified. Likewise, modifying the content of preparation programs to meet the needs of female students increases the likelihood that females enter and complete the programs. One modification may include the gender of the professor providing the instruction. By hiring more female professors within educational administration departments, female students will have role models and potential support networks. Lastly, altering or increasing administrative roles within the public school system may increase opportunities for females as administrators (Shakeshaft, 1987). As structural barriers are lessened and females become an integral resources in administration, a reduction of sociocultural causations (male hegemony and androcentric bias) demonstrated by parents, staff and most importantly, students should be realized.

4. Experienced principals and those employed in more rural buildings are more likely to perceive barriers that dissuade them from aspiring to the superintendency than are their less experienced and more urban counterparts. This is because less experienced principals may not have encountered as many potentially biased situations in their tenure as principals. Similarly, rural school districts and school buildings tend to have a very local set of cultural values and expectations that are often traditional in nature. Thus openness to females serving as superintendents is less likely in such districts. And female principals in such settings may have encountered barriers even as they attempt to promote change at the building level, discouraging them from seeing themselves in positions such as the superintendency (Dana & Bourisaw, 2006).

5. Those female principals that report they have applied or intend to apply for the superintendency in the future will differ significantly from those that have no such intention in terms of the number, strength and nature of the barriers they perceive.

Summary

This chapter describes the methods and procedures to be conducted to provide awareness of reasons female principals do not aspire to the superintendency. As has been previously discussed, the current labor market pool of applicants for superintendent positions are statistically represented for males and female superintendents within the Commonwealth of Pennsylvania. The research problem, study design, study context, population and sample, instrumentation, data collection, and data analysis will be used to formulate a statistical determination of the validity of the hypothesis that female principals perceive barriers to the superintendency and are thereby not becoming aspirants to the superintendency. Upon conclusion of the data collection process, data findings will be presented in Chapter 4. Likewise, data findings will lead to discussions, conclusions, implications, and recommendations for further research, which will be presented in Chapter 5 of the research study.

Limitations

This study's limitations include the following:

1. Turnover is common in building principalships and school districts are not mandated to publish this information. Records used for this study may have not been accurate resulting in emails (survey invitation) to be sent to female principals no longer in those positions.

2. The sample population in this study did not include any principals outside of Western Pennsylvania. Principals outside Western Pennsylvania may experience different or no barriers that dissuade them from aspiring to the superintendency.
3. The sample population in this study did not include male principals. Male principals may experience barriers that dissuade them from aspiring to the superintendency, however, this study cannot be generalized to that segment of principals within Pennsylvania.
4. Assistant principals, regardless of gender were not included in the study's sample population. Female assistant principals may also experience barriers related to the research questions, however, they cannot be generalized to the results of this study.
5. The sample population in this study did not include private, charter, cyber-charter, or intermediate unit principals. The results of this study cannot be generalized to this population of principals.
6. A possible limitation to use of an online survey and email notification may be a reduce importance to participation in the research and completion of the survey. Principals received a large number of emails, many of which are vendor or sales solicitations. An email request for survey participation may have been dismissed by female principals or been marked as SPAM in an email filtering system.

Assumptions

1. It is assumed all survey respondents provided factual information on their surveys.
2. It is assumed all survey respondents had the knowledge and information necessary to respond accurately to the survey questions.
3. It is assumed that only female principals in Western Pennsylvania (Intermediate Units 1, 2, 3, 4, 5, and 27) responded to the survey.

CHAPTER 4

FINDINGS

Introduction

Women have played integral and instrumental roles in public education since its inception and continue to do so today. They comprise the majority of the workforce in education and as such female employees provide a disproportionate share of the stability and expertise necessary for public education to function effectively and efficiently; yet women continue to be underrepresented in the ranks of superintendent of schools. This study examined the barriers that were perceived to be important for female principals when considering whether or not to aspire to a superintendent position in the future. The literature identified 21 barriers, labeled as "items for consideration" in the survey, seven from each of the barrier taxonomies identified by the literature: structural, sociocultural, and intrapersonal.

Survey responses were downloaded in Excel and SPSS formats from SurveyMonkey, an online survey instrument. Statistical Package for the Social Sciences, Version 20 was used to analyze data using frequency distribution charts, independent samples *t* tests, one-way ANOVAs and Pearson's chi-squared tests. For independent variables that were categorized by two (2) categories, independent samples *t* tests were conducted to determine difference in mean significance. Independent variables that were categorized into three (3) or more groups were analyzed using a one-way ANOVA and post hoc reports. To determine the relation between nominal-level respondent demographic and a respondent's intent to pursue the superintendency, Pearson's chi-squared tests were used.

Five research questions were used to elicit factors influencing female principal aspiration to the superintendency. First, the rate of aspiration to the superintendency by female principals in the survey area is explored using descriptive statistics. Question two uses descriptive statistics to determine which barriers and taxonomy of barriers, Table 3, are most formidable to female principals in seeking the superintendency. The third question examined the relationship between perceived barriers to the superintendency and demographic categories of respondents using both one-way ANOVAs and independent samples *t* tests. An independent samples *t* test is used for the fourth question, seeking to understand the relationship between female aspirants and non-aspirants and perceived barriers to the superintendency. The fifth research question employed cross tabulations and chi-squared tests to determine the relation between a female principals' intent to seek the superintendency and nominal-level demographic.

Table 3 displays the 21 barriers or "items for consideration" in seeking the superintendency and the corresponding taxonomy to which it belongs, according to the literature. The barriers listed in Table 3 are organized by taxonomy, however, the survey instrument provided respondents with barriers alternating among sociocultural, intrapersonal, and structural taxonomies to increase the respondent's focus on individual barriers rather than any potential categorization of barriers.

Table 3

Perceived Barriers and Corresponding Taxonomy, N=21

Perceived Barrier	Taxonomy
Lack of pro-family policies or support services (e.g., childcare, telecommuting, flexible work schedules).	Structural
Lack of networks and mentorships for female administrators.	Structural
Lack of preparation programs offered by colleges or professional organizations for ASPIRING female superintendents.	Structural
Lack of female role models for women in administrative positions.	Structural
Female promotions tend to be horizontal reassignments (i.e., new title but same authority).	Structural
No direct administrative pathway from elementary administration to superintendency.	Structural
Professional organizations are not helpful in recruitment and placement of females in the superintendency.	Structural
The perception that the superintendent needs to possess a specific leadership style.	Sociocultural
You need to be a member of the "old boys' club" to become a superintendent.	Sociocultural
Female superintendents are not well accepted by community and school board.	Sociocultural
Male faculty have difficulty working with female supervisors.	Sociocultural
I would prefer to be recruited or offered my next administrative position rather than apply or let my intentions be known.	Sociocultural
The perception that the superintendent needs to be an authoritarian rather than a participatory leader.	Sociocultural
Female administrators need to work harder than male administrators to "show" or "prove" they are competent.	Sociocultural
Uncertain future of funding for public schools.	Intrapersonal
Accountability pressures.	Intrapersonal
Local politics (public, press, community, labor, and school board relations).	Intrapersonal
Inadequate compensation for level of responsibility and time commitment.	Intrapersonal
Family concerns, restrictions, obligations.	Intrapersonal
A focus towards fiscal management and away from student learning.	Intrapersonal
Need to relocate.	Intrapersonal

Pre-Analysis Data Screening

Accuracy

Quantitative studies rely on important assumptions and data cleaning to ensure validity, reliability and generalization of results (Osborne, 2013). To be sure the data used for this study accurately reflect current female principals in Western, Pennsylvania, an email distribution list was created by cross-referencing Local Educational Agency (LEA) district websites with Intermediate Unit (IU) directories for IU 1, 2, 3, 4, 5, and 27. The online survey invitation was sent by email to 204 potential female principals within Western Pennsylvania. Fifty survey responses were collected by SurveyMonkey and used for data analysis within this study, equating to a 24.5% response rate. Due to the small sample size, a .10 alpha level was used as opposed to a typical .05 alpha level. This was done to reduce the possibility of Type II error. Type II error occurs when the null hypothesis is not rejected when it is really false. In other words, true effect is not found to be significant (Fraenkel and Wallen, 1996).

Missing Data

Respondents were asked to rate 21 items for consideration in deciding whether or not to seek the superintendency. Respondents were able to skip individual items within the survey without consequence, ability to continue with the questions if so desired. Of the 21 items, only two items did not receive a 100% response rate, N=50. The two items that did not receive a 100% response rate did receive a 98% (49 of 50) response rate. Table 4 displays the items for consideration and total number of responses. Missing data items were not replaced for data analysis.

Table 4

Response Count for Items for Consideration, N=50

Item for Consideration	Response Count
Family concerns, restrictions, obligations.	50
Local politics (public, press, community, labor, and school board relations).	50
Inadequate compensation for level of responsibility and time commitment.	50
The perception that the superintendent needs to possess a specific leadership style.	50
A focus towards fiscal management and away from student learning.	50
Female administrators need to work harder than male administrators to "show" or "prove" they are competent.	50
You need to be a member of the "old boys' club" to become a superintendent.	50
Accountability pressures.	49
Lack of pro-family policies or support services (e.g., childcare, telecommuting, flexible work schedules).	50
Female promotions tend to be horizontal reassignments (i.e., new title but same authority).	49
Uncertain future of funding for public schools.	50
Lack of networks and mentorships for female administrators.	50
I would prefer to be recruited or offered my next admin position rather than apply or let my intentions known.	50
Need to relocate.	50
No direct administrative pathway from elementary administration to superintendency.	50
Female superintendents are not well accepted by community and school board.	50
The perception that the superintendent needs to be an authoritarian rather than a participatory leader.	50
Professional organizations are not helpful in recruitment and placement of females in the superintendency.	50
Lack of female role models for women in administrative positions.	50
Lack of preparation programs offered by colleges or professional organization for ASPIRING female superintendents.	50
Male faculty have difficulty working with female supervisors.	50

Respondents were asked 10 demographic questions. Of the 10 demographic questions, only three questions did not receive a 100 % response rate, N=50. The three items that did not receive a 100% response rate did receive at least a 96% response rate, however, 5 responses of "other" were removed from the initial data set for the demographic question, *What type of building do you currently supervise,* equating to a 90% response rate for that demographic question. These responses were removed because they were not easily able to be regrouped into other response categories. Table 5 displays the demographic question response rate. Missing data items were not replaced for data analysis.

Table 5

Response Count for Demographic Questions, N=50

Demographic Question	Response Count
Years as a building principal?	50
What is you highest earned degree?	50
Do you hold a superintendent certification?	50
Do you intent to pursue the superintendency in the future?	50
What type of building do you currently supervise?	45
In what type of community is your building located?	49
What is the student enrollment in your DISTRICT, January 2016?	48
What is the student enrollment in your BUILDING, January 2016?	50
What is your age?	50
What is your family status?	49

Respondents were asked two open-ended questions. Thirty-four of the 50 participants provided a response to the open-ended questions. This equates to a 68%

response rate, however, data from the open-ended questions was used for qualitative analysis. Table 6 displays the open-ended questions response rate.

Table 6

Response Count for Open-Ended Questions, N=50

Open-ended Question	Response Count
What incentives or superintendent job modifications would attract you to apply for a superintendent position in the future?	34
What changes to the educational system (Kindergarten – Higher ed.) would attract more female principals to become certified as superintendents?	34

Outliers

Extreme values in a data set are considered outliers and can distort statistical analysis. Because the data for this quantitative analysis were collected by fixed choice, no outliers were identified.

Normality

The data set were examined for normal distribution, minimum 20% of respondents per demographic category. For this study, N = 50 caused several demographic categories to fall under the 20% threshold, thereby requiring regrouping. Table 7 – Table 20 display all demographic data distributions, regroupings were necessary for the following categories; years as a building principal, building type, building enrollment, respondent age, and family status.

Table 7

Original Frequency Counts for, Years as Building Principal

Answer Option		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-5	16	32.0	32.0	32.0
	6-10	18	36.0	36.0	68.0
	11-20	13	26.0	26.0	94.0
	over 20	3	6.0	6.0	100.0
	Total	50	100.0	100.0	

Table 8

Regrouped Frequency Counts for, Years as Building Principal

Answer Option		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-5	16	32.0	32.0	32.0
	6-11	18	36.0	36.0	68.0
	11+	16	32.0	32.0	100.0
	Total	50	100.0	100.0	

Table 9

Original Frequency Counts for, Building Type

Answer Option		Frequency	Percent	Valid Percent	Cumulative Percent
Valid					
	Elementary School	30	60.0	60.0	60.0
	Middle School / Jr. High School	3	6.0	6.0	66.0
	High School	12	24.0	24.0	90.0
	Other (please specify)	5	10.0	10.0	100.0
	Total	50	100.0	100.0	

Table 10

Regrouped Frequency Counts for, Building Type

Answer Option		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Elem/Middle School	33	66.0	73.3	73.3
	High School	12	24.0	26.7	100.0
	Total	45	90.0	100.0	
Missing	System	5	10.0		
Total		50	100.0		

For Table 10 the category of "*other"* was not used in the data analysis as answers varied beyond the grouping categories.

Table 11

Original Frequency Counts for, Building Enrollment?

Answer Option		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-99	1	2.0	2.0	2.0
	100-299	9	18.0	18.0	20.0
	300-599	31	62.0	62.0	82.0
	600-999	6	12.0	12.0	94.0
	1,000-1,999	3	6.0	6.0	100.0
	Total	50	100.0	100.0	

Table 12

Regrouped Frequency Counts for, Building Enrollment

Answer Option		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-299	10	20.0	20.0	20.0
	300-599	31	62.0	62.0	82.0
	600+	9	18.0	18.0	100.0
	Total	50	100.0	100.0	

Table 13

Original Frequency Counts for, Principal's Age

Answer Option		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<30	0	0	0	0
	30–40	12	24.0	24.0	24.0
	41-50	29	58.0	58.0	82.0
	51-60	8	16.0	16.0	98.0
	>60	1	2.0	2.0	100.0
	Total	50	100.0	100.0	

Table 14

Regrouped Frequency Counts for, Principal's Age

Answer Option		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	30-40	12	24.0	24.0	24.0
	41-50	29	58.0	58.0	82.0
	51+	9	18.0	18.0	100.0
	Total	50	100.0	100.0	

Table 15

Original Frequency Counts for, Family Status

Answer Option		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Two-adult household	12	24.0	24.5	24.5
	Two adult household with school age child(ren)	25	50.0	51.0	75.5
	Single adult household	5	10.0	10.2	85.7
	Single parent household with school age child(ren)	7	14.0	14.3	100.0
	Total	49	98.0	100.0	
Missing	System	1	2.0		
Total		50	100.0		

Table 16

Regrouped Frequency Counts for, Family Status

Answer Option		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Without children	17	34.0	34.7	34.7
	With children	32	64.0	65.3	100.0
	Total	49	98.0	100.0	
Missing	System	1	2.0		
Total		50	100.0		

Table 17

Frequency Counts and Percentages for District Enrollment

Answer Option		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-1,500	12	25.0	25.0	25.0
	1,501-3,000	14	29.0	29.0	54.0
	3,000-5,000	13	27.0	27.0	81.0
	More than 5,000	9	19	19.0	100
	Total	48	100.0	100.0	

Table 18

Frequency Counts and Percentages for Building Location

Answer Option		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Urban	10	20.0	20.0	20.0
	Suburban	24	49.0	49.0	69.0
	Rural	15	31.0	31.0	100.0
	Total	49	100.0	100.0	

Table 19

Frequency Counts and Percentages for Superintendent Certification

Answer Option		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	16	32.0	32.0	32.0
	No	34	68.0	68.0	100.0
	Total	50	100.0	100.0	

Table 20

Frequency Counts and Percentages for Intent to Pursue Superintendency

Answer Option		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	20	40.0	40.0	40.0
	No	30	60.0	60.0	60.0
	Total	50	100.0	100.0	

Data Analysis

Research Question 1

At what rate do current female principals aspire to the superintendency in Western Pennsylvania?

A frequency distribution chart, Table 20, displays that 20 of the 50 (40%) current female principals in Western Pennsylvania responding to the survey intend to aspire to the superintendency in the future. This percentage is greater than the 28% of current superintendents in the state who are female (PDE, 2015). It also exceeds the 30.6%, of females currently holding superintendent certification in the state (PDE, 2014).

Research Question 2

What barriers and taxonomy of barriers do female principals perceive as most formidable in advancing to the superintendency?

Prevalence. Prevalent barriers are those that 50% or more of the respondents agreed were considerations in whether or not to pursue the superintendency. Respondents identified seven prevalent barriers out of the 21 considerations in the survey. Of the respondents, 72% agreed or strongly agreed that 1) *Family concerns, restrictions, obligations* and 2) *Local politics (public, press, community, labor, and*

school board relations) were barriers to pursuing the superintendency; followed by 3) *Inadequate compensation for level of responsibility and time commitment*, identified by 62% of the respondents as a consequential barrier. Table 21 displays the prevalence with which all barriers were identified from highest prevalence to lowest and the taxonomy with which the barriers are associated.

Table 21

Response Prevalence and Taxonomy for Perceived Barriers, N=50

Answer Options	Prevalence %	Taxonomy
Family concerns, restrictions, obligations.	72%	Intrapersonal
Local politics (public, press, community, labor, and school board relations).	72%	Intrapersonal
Inadequate compensation for level of responsibility and time commitment.	62%	Intrapersonal
The perception that the superintendent needs to possess a specific leadership style.	58%	Sociocultural
A focus towards fiscal management and away from student learning.	56%	Intrapersonal
Female administrators need to work harder than male administrators to "show" or "prove" they are competent.	52%	Sociocultural
You need to be a member of the "old boys' club" to become a superintendent.	50%	Sociocultural
Accountability pressures.	47%	Intrapersonal
Lack of pro-family policies or support services (e.g., childcare, telecommuting, flexible work schedules).	46%	Structural
Female promotions tend to be horizontal reassignments (i.e., new title but same authority).	39%	Structural
Uncertain future of funding for public schools.	38%	Intrapersonal
Lack of networks and mentorships for female administrators.	38%	Structural
I would prefer to be recruited or offered my next admin position rather than apply or let my intentions be known.	36%	Sociocultural
Need to relocate.	34%	Intrapersonal
No direct administrative pathway from elementary administration to superintendency.	32%	Structural
Female superintendents are not well accepted by community and school board.	32%	Sociocultural

Answer Options	Prevalence %	Taxonomy
The perception that the superintendent needs to be an authoritarian rather than a participatory leader.	32%	Sociocultural
Professional organizations are not helpful in recruitment and placement of females in the superintendency.	28%	Structural
Lack of female role models for women in administrative positions.	30%	Structural
Lack of preparation programs offered by colleges or professional organizations for ASPIRING female superintendents.	20%	Structural
Male faculty have difficulty working with female supervisors.	10%	Sociocultural

Of the three taxonomies, structural, sociocultural and intrapersonal, the three most prevalent barriers were intrapersonal in nature, as were four of the total of seven barriers found to be prevalent. Three of the other prevalent barriers were sociocultural, including: 1) *The perception that the superintendent needs to possess a specific leadership style*, cited by 58%, 2) *Female administrators need to work harder than male administrators to show or prove they are competent*, cited by 52%; and 3) *You need to be a member of the "old boys' club" to become superintendent*, cited by 50% of the respondents. No structural barrier was cited by 50% or more of the respondents. The most often cited structural barrier was the *Lack of pro-family policies or support services (e.g., childcare, telecommunicating, flexible work schedules),* cited by 46% of the respondents.

Formidability. While the fact that less than a majority of the respondents consider a particular consideration a barrier does not mean that individuals or even substantial numbers of individuals, even though a minority, might evaluate considerations differently or ascribe a particularly disproportionate importance to one verse another barrier. Consequently, to ascertain the intensity with which various barriers are perceived, strength of agreement or disagreement with respect to what constituted a barrier, was explored. A formidability rating was arrived by computing the mean score

for each barrier, assigning a numerical value to each of the Likert scale responses, providing both an indicator of direction and magnitude. Thus a 1 represents strongly disagreeing with the consideration as a barrier, a value of 2 for disagreeing, and 3 for respondents neither agreeing nor disagreeing about the proffered consideration, a 4 represents agreement that the consideration constituted a barrier, while strong agreement was assigned a value of 5. Thus the higher the mean score, the stronger the agreement that the barrier was considered a formidable one.

Table 22 sets out the mean scores representing the intensity with which each consideration is evaluated a barrier to the superintendency by the female respondents. The means for the 21 considerations ranged from 2.34 to a high of 3.80. Considerations with means above 3.30 are deemed "very formidable", while those between 3.01 and 3.39 are labeled "formidable" and those with a 3.0 or lower are evaluated on average as "least formidable" with 4 of the eight being "very formidable". All four of the very formidable barriers are associated with the intrapersonal taxonomy, while structural barriers are disproportionately represented among those considered the least formidable.

Table 22

Perceived Formidability of Barriers Ranked by Mean Scores, N=50

Perceived Barrier	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Mean	Taxonomy
Family concerns, restrictions, obligations.	3	6	5	20	16	3.80	Intrapersonal
Local politics (public, press, community, labor, and school board relations).	4	5	5	26	10	3.66	Intrapersonal
Inadequate compensation for level of responsibility and time commitment.	4	9	6	20	11	3.50	Intrapersonal

Perceived Barrier	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Mean	Taxonomy
A focus towards fiscal management and away from student learning.	4	7	11	19	9	3.44	Intrapersonal
Female administrators need to work harder than male administrators to "show" or "prove" they are competent.	5	11	8	14	12	3.34	Sociocultural
The perception that the superintendent needs to possess a specific leadership style.	7	7	7	22	7	3.30	Sociocultural
Lack of pro-family policies or support services (e.g., childcare, telecommuting, flexible work schedules) .	5	13	9	12	11	3.22	Structural
You need to be a member of the "old boys' club" to become a superintendent.	8	13	4	12	13	3.18	Sociocultural
Accountability pressures.	2	14	10	20	3	3.16	Intrapersonal
Need to relocate.	4	11	18	11	6	3.08	Intrapersonal
Female promotions tend to be horizontal reassignments (i.e., new title but same authority).	3	13	14	15	4	3.08	Structural
Uncertain future of funding for public schools.	4	11	16	16	3	3.06	Intrapersonal
No direct administrative pathway from elementary administration to superintendency.	3	13	18	15	1	2.96	Structural
Lack of networks and mentorships for female administrators.	5	19	7	15	4	2.88	Structural
Professional organizations are not helpful in recruitment and placement of females in the superintendency.	5	13	18	11	3	2.88	Structural

Perceived Barrier	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Mean	Taxonomy
Female superintendents are not well accepted by community and school board.	4	23	7	9	7	2.84	Sociocultural
I would prefer to be recruited or offered my next administrative position rather than apply or let my intentions be known.	9	11	12	17	1	2.80	Sociocultural
Lack of female role models for women in administrative positions.	7	16	12	11	4	2.78	Structural
The perception that the superintendent needs to be an authoritarian rather than a participatory leader.	7	20	7	12	4	2.72	Sociocultural
Lack of preparation programs offered by colleges or professional organizations for ASPIRING female superintendents.	6	24	10	7	3	2.54	Structural
Male faculty have difficulty working with female supervisors.	8	27	7	6	2	2.34	Sociocultural

Research Question 3

Do the barriers or taxonomy of barriers differ based on the principal's age, family status, Years of experience, school type, school size, district size, or community type?

This question sought to determine if perceived barriers (dependent variables) to the superintendency differed for female principals based on various demographic factors (independent variables) of either personal or organizational nature. Table 7 – Table 16 display how the independent variables were regrouped. Independent variables were

regrouped from the initial survey response groupings to include 20% of the respondents in each category. Only two independent variables were unable to be regrouped to achieve a 20% threshold, *Student enrollment in your building* of 600+ (18%) and *Principal's age* of 51+ (18%).

Once regroupings had been completed, either an independent samples *t* test or one-way ANOVA was used to determine if any differences in means existed between respondent independent variables and the perceived barriers, dependent variables, to aspire to the superintendency. The hypothesis for this research question was that only one independent variable, *living with school aged children*, would have a statistical significance ($p < .10$) for dependent variables (perceived barriers). All other independent variables, *principal's age*, *years of experience*, *school type*, *school size*, *community type* and *district size* would have no significant differences ($p < .10$). An alpha level of .10 was used for all statistical tests ensure type II error was minimized; not identifying a significant difference in means, was not made in determining significance. Likewise, due to a small sample size of N=50, a .05 or 5% alpha was rejected in preference to a .10 alpha level. Post hoc reports were completed on ANOVA data to confirm statistically significant data.

Community type. A one-way ANOVA was completed to determine if statistical differences ($p < .10$) exist between perceived barriers based on the community type of the principal's building. Table 23 and 24 display that the difference in mean scores was significant ($p < 1.0$) for two of the perceived barriers.

There was a significant effect of *Female superintendents are not well accepted by the community and school board* on community types at the $p<.10$ level for the

conditions [F (2, 46) = 3.24, p = .048]. Post hoc comparisons using Bonferroni's procedure indicated that the mean score for the urban principals (M = 3.70, SD = 1.06) was significantly different than the suburban principals (M = 2.58, SD = 1.24) and rural principals (M = 2.73, SD = 1.16). These results suggest female principals working in urban communities perceive the structural barrier, *Female superintendents are not well accepted by the community and school board,* more formidable than those female principals working in suburban or rural settings.

There was a significant effect of *Lack of networks and mentorships for female administrators* on community types at the p<.10 level for the conditions [F (2, 46) = 2.86, p = .068]. Post hoc comparisons using Bonferroni's procedure indicated that the mean score for the rural principals (M = 3.27, SD = 1.03) was significantly different than the suburban principals (M = 2.46, SD = 1.10). However, the urban principals (M = 3.20, SD = 1.39) did not significantly differ from rural principals or suburban principals. These results suggest rural principals are more likely to identify the structural barrier, *Lack of networks and mentorships for female administrators*, as a barrier to aspiring to the superintendency as compared to suburban principals.

Table 23

One-way ANOVA: Group Statistics for Community Type

Perceived Barrier	Community Type	N	Mean	Std. Deviation	Std. Error
The perception that the superintendent needs to possess a specific leadership style.	1.00 Urban	10	3.9000	1.37032	.43333
	2.00 Suburban	24	3.3333	1.16718	.23825
	3.00 Rural	15	2.8667	1.35576	.35006
	Total	49	3.3061	1.29428	.18490
A focus towards fiscal management and away from student learning.	1.00 Urban	10	3.4000	1.26491	.40000
	2.00 Suburban	24	3.6667	.91683	.18715
	3.00 Rural	15	3.0667	1.48645	.38380
	Total	49	3.4286	1.19024	.17003

Perceived Barrier	Community Type	N	Mean	Std. Deviation	Std. Error
Lack of female role models for women in administrative positions.	1.00 Urban	10	2.8000	1.22927	.38873
	2.00 Suburban	24	2.6667	1.20386	.24574
	3.00 Rural	15	2.8667	1.18723	.30654
	Total	49	2.7551	1.18199	.16886
You need to be a member of the "old boys' club" to become a superintendent.	1.00 Urban	10	3.6000	1.64655	.52068
	2.00 Suburban	24	3.0000	1.38313	.28233
	3.00 Rural	15	3.0667	1.53375	.39601
	Total	49	3.1429	1.47196	.21028
Uncertain future of funding for public schools.	1.00 Urban	10	2.8000	1.13529	.35901
	2.00 Suburban	24	3.0833	1.13890	.23248
	3.00 Rural	15	3.2000	.94112	.24300
	Total	49	3.0612	1.06865	.15266
Lack of preparation programs offered by colleges or professional organizations for ASPIRING female superintendents.	1.00 Urban	10	2.6000	1.26491	.40000
	2.00 Suburban	24	2.2500	.94409	.19271
	3.00 Rural	15	2.8000	.94112	.24300
	Total	49	2.4898	1.02312	.14616
Female superintendents are not well accepted by community and school board.	1.00 Urban	10	3.7000	1.05935	.33500
	2.00 Suburban	24	2.5833	1.24819	.25479
	3.00 Rural	15	2.7333	1.16292	.30026
	Total	49	2.8571	1.24164	.17738
Accountability pressures.	1.00 Urban	9	2.5556	1.01379	.33793
	2.00 Suburban	24	3.2500	1.07339	.21911
	3.00 Rural	15	3.4667	.91548	.23637
	Total	48	3.1875	1.04487	.15081
Lack of networks and mentorships for female administrators.	1.00 Urban	10	3.2000	1.39841	.44222
	2.00 Suburban	24	2.4583	1.10253	.22505
	3.00 Rural	15	3.2667	1.03280	.26667
	Total	49	2.8571	1.19024	.17003
Male faculty have difficulty working with female supervisors.	1.00 Urban	10	2.7000	.94868	.30000
	2.00 Suburban	24	2.3333	1.12932	.23052
	3.00 Rural	15	2.1333	.91548	.23637
	Total	49	2.3469	1.03181	.14740
Local politics (public, press, community, labor, and school board relations).	1.00 Urban	10	3.6000	1.50555	.47610
	2.00 Suburban	24	3.5417	1.14129	.23296
	3.00 Rural	15	3.8667	.99043	.25573
	Total	49	3.6531	1.16460	.16637
Lack of pro-family policies or support services (e.g., childcare, telecommuting, flexible work schedules).	1.00 Urban	10	3.2000	1.31656	.41633
	2.00 Suburban	24	3.3333	1.55106	.31661
	3.00 Rural	15	3.0667	1.03280	.26667
	Total	49	3.2245	1.34265	.19181

Perceived Barrier	Community Type	N	Mean	Std. Deviation	Std. Error
The perception that the superintendent needs to be an authoritarian rather than a participatory leader.	1.00 Urban	10	3.0000	1.41421	.44721
	2.00 Suburban	24	2.7083	1.23285	.25166
	3.00 Rural	15	2.6000	1.12122	.28950
	Total	49	2.7347	1.22092	.17442
Inadequate compensation for level of responsibility and time commitment.	1.00 Urban	10	3.5000	1.43372	.45338
	2.00 Suburban	24	3.2917	1.26763	.25875
	3.00 Rural	15	3.8000	1.14642	.29601
	Total	49	3.4898	1.26033	.18005
Professional organizations are not helpful in recruitment and placement of females in the superintendency.	1.00 Urban	10	2.9000	1.19722	.37859
	2.00 Suburban	24	2.9583	1.08264	.22099
	3.00 Rural	15	2.7333	1.03280	.26667
	Total	49	2.8776	1.07301	.15329
Female administrators need to work harder than male administrators to “show” or “prove” they are competent.	1.00 Urban	10	3.6000	1.57762	.49889
	2.00 Suburban	24	3.2500	1.39096	.28393
	3.00 Rural	15	3.2667	1.16292	.30026
	Total	49	3.3265	1.34455	.19208
Need to relocate.	1.00 Urban	10	3.1000	1.28668	.40689
	2.00 Suburban	24	2.9583	1.12208	.22904
	3.00 Rural	15	3.3333	1.04654	.27021
	Total	49	3.1020	1.12259	.16037
No direct administrative pathway from elementary administration to superintendency.	1.00 Urban	10	3.1000	1.19722	.37859
	2.00 Suburban	24	3.0000	.93250	.19035
	3.00 Rural	15	2.7333	.79881	.20625
	Total	49	2.9388	.94446	.13492
I would prefer to be recruited or offered my next administrative position rather than apply or let my intentions be known.	1.00 Urban	10	2.6000	1.26491	.40000
	2.00 Suburban	24	2.9583	1.19707	.24435
	3.00 Rural	15	2.6000	1.05560	.27255
	Total	49	2.7755	1.15948	.16564
Family concerns, restrictions, obligations.	1.00 Urban	10	3.6000	1.50555	.47610
	2.00 Suburban	24	3.9583	1.23285	.25166
	3.00 Rural	15	3.7333	.96115	.24817
	Total	49	3.8163	1.20197	.17171
Female promotions tend to be horizontal reassignments (i.e., new title but same authority).	1.00 Urban	10	3.6000	1.26491	.40000
	2.00 Suburban	23	3.0435	.92826	.19355
	3.00 Rural	15	2.8667	1.12546	.29059
	Total	48	3.1042	1.07663	.15540

Table 24

Community Type: ANOVA

ANOVA

Perceived Barrier	Community Type	Sum of Squares	df	Mean Square	F	Sig.
The perception that the superintendent needs to possess a specific leadership style.	Between Groups	6.441	2	3.221	2.003	.147
	Within Groups	73.967	46	1.608		
	Total	80.408	48			
A focus towards fiscal management and away from student learning.	Between Groups	3.333	2	1.667	1.186	.315
	Within Groups	64.667	46	1.406		
	Total	68.000	48			
Lack of female role models for women in administrative positions.	Between Groups	.395	2	.197	.136	.873
	Within Groups	66.667	46	1.449		
	Total	67.061	48			
You need to be a member of the "old boys' club" to become a superintendent.	Between Groups	2.667	2	1.333	.605	.550
	Within Groups	101.333	46	2.203		
	Total	104.000	48			
Uncertain future of funding for public schools.	Between Groups	.983	2	.491	.420	.660
	Within Groups	53.833	46	1.170		
	Total	54.816	48			
Lack of preparation programs offered by colleges or professional organizations for ASPIRING female superintendents.	Between Groups	2.945	2	1.472	1.432	.249
	Within Groups	47.300	46	1.028		
	Total	50.245	48			
Female superintendents are not well accepted by community and school board.	Between Groups	9.133	2	4.567	3.238	**.048***
	Within Groups	64.867	46	1.410		
	Total	74.000	48			
Accountability pressures.	Between Groups	4.857	2	2.428	2.352	.107
	Within Groups	46.456	45	1.032		
	Total	51.313	47			
Lack of networks and mentorships for female administrators.	Between Groups	7.508	2	3.754	2.855	**.068***
	Within Groups	60.492	46	1.315		
	Total	68.000	48			
Male faculty have difficulty working with female supervisors.	Between Groups	1.935	2	.968	.905	.411
	Within Groups	49.167	46	1.069		
	Total	51.102	48			
Local politics (public, press, community, labor, and school board relations).	Between Groups	1.010	2	.505	.363	.698
	Within Groups	64.092	46	1.393		
	Total	65.102	48			
Lack of pro-family policies or support services (e.g., childcare, telecommuting, flexible work schedules).	Between Groups	.664	2	.332	.178	.838
	Within Groups	85.867	46	1.867		
	Total	86.531	48			
The perception that the superintendent needs to be an authoritarian rather than a participatory leader.	Between Groups	.993	2	.496	.324	.725
	Within Groups	70.558	46	1.534		
	Total	71.551	48			

Perceived Barrier	Community Type	Sum of Squares	df	Mean Square	F	Sig.
Inadequate compensation for level of responsibility and time commitment.	Between Groups	2.387	2	1.193	.743	.481
	Within Groups	73.858	46	1.606		
	Total	76.245	48			
Professional organizations are not helpful in recruitment and placement of females in the superintendency.	Between Groups	.474	2	.237	.199	.820
	Within Groups	54.792	46	1.191		
	Total	55.265	48			
Female administrators need to work harder than male administrators to "show" or "prove" they are competent.	Between Groups	.942	2	.471	.252	.778
	Within Groups	85.833	46	1.866		
	Total	86.776	48			
Need to relocate.	Between Groups	1.298	2	.649	.504	.607
	Within Groups	59.192	46	1.287		
	Total	60.490	48			
No direct administrative pathway from elementary administration to superintendency.	Between Groups	.983	2	.491	.540	.586
	Within Groups	41.833	46	.909		
	Total	42.816	48			
I would prefer to be recruited or offered my next administrative position rather than apply or let my intentions be known.	Between Groups	1.572	2	.786	.574	.567
	Within Groups	62.958	46	1.369		
	Total	64.531	48			
Family concerns, restrictions, obligations.	Between Groups	1.055	2	.528	.355	.703
	Within Groups	68.292	46	1.485		
	Total	69.347	48			
Female promotions tend to be horizontal reassignments (i.e., new title but same authority).	Between Groups	3.389	2	1.695	1.493	.236
	Within Groups	51.090	45	1.135		
	Total	54.479	47			

Year's as building principal. A one-way ANOVA was completed to determine if statistical differences ($p < .10$) exist between perceived barriers based on principal experience. Table 25 and Table 26 display that the differences in mean scores was not significant ($p < .10$) for the three principal years of experience groups for any of the perceived barriers.

Table 25

One-way ANOVA: Group Statistics for Years as Building Principal

Perceived Barrier	Years as Building Principal	N	Mean	Std. Deviation	Std. Error
The perception that the superintendent needs to possess a specific leadership style.	1.00 0-5	16	3.3750	1.14746	.28687
	2.00 6-10	18	3.1111	1.49071	.35136
	3.00 11+	16	3.4375	1.20934	.30233
	Total	50	3.3000	1.28174	.18127
A focus towards fiscal management and away from student learning.	1.00 0-5	16	3.3750	1.14746	.28687
	2.00 6-10	18	3.4444	1.29352	.30489
	3.00 11+	16	3.5000	1.15470	.28868
	Total	50	3.4400	1.18080	.16699
Lack of female role models for women in administrative positions.	1.00 0-5	16	2.6250	1.08781	.27195
	2.00 6-10	18	2.7222	1.31978	.31108
	3.00 11+	16	3.0000	1.15470	.28868
	Total	50	2.7800	1.18304	.16731
You need to be a member of the "old boys' club" to become a superintendent.	1.00 0-5	16	2.6250	1.45488	.36372
	2.00 6-10	18	3.2222	1.30859	.30844
	3.00 11+	16	3.6875	1.57982	.39496
	Total	50	3.1800	1.48035	.20935
Uncertain future of funding for public schools.	1.00 0-5	16	3.3125	1.01448	.25362
	2.00 6-10	18	3.0000	1.18818	.28006
	3.00 11+	16	2.8750	.95743	.23936
	Total	50	3.0600	1.05772	.14958
Lack of preparation programs offered by colleges or professional organizations for ASPIRING female superintendents.	1.00 0-5	16	2.6875	1.13835	.28459
	2.00 6-10	18	2.3889	.91644	.21601
	3.00 11+	16	2.5625	1.20934	.30233
	Total	50	2.5400	1.07305	.15175
Female superintendents are not well accepted by community and school board.	1.00 0-5	16	2.6250	1.08781	.27195
	2.00 6-10	18	2.8889	1.18266	.27876
	3.00 11+	16	3.0000	1.46059	.36515
	Total	50	2.8400	1.23487	.17464
Accountability pressures.	1.00 0-5	16	3.1875	.98107	.24527
	2.00 6-10	18	3.1667	.98518	.23221
	3.00 11+	15	3.1333	1.24595	.32170
	Total	49	3.1633	1.04775	.14968
Lack of networks and mentorships for female administrators.	1.00 0-5	16	2.6250	1.14746	.28687
	2.00 6-10	18	3.3333	1.13759	.26813
	3.00 11+	16	2.6250	1.20416	.30104
	Total	50	2.8800	1.18907	.16816
Male faculty have difficulty working with female supervisors.	1.00 0-5	16	2.3125	1.01448	.25362
	2.00 6-10	18	2.3889	1.19503	.28167
	3.00 11+	16	2.3125	.87321	.21830
	Total	50	2.3400	1.02240	.14459

Perceived Barrier		N	Mean	Std. Deviation	Std. Error
Local politics (public, press, community, labor, and school board relations).	1.00 0-5	16	3.4375	1.15289	.28822
	2.00 6-10	18	3.9444	.87260	.20567
	3.00 11+	16	3.5625	1.41274	.35318
	Total	50	3.6600	1.15370	.16316
Lack of pro-family policies or support services (e.g., childcare, telecommuting, flexible work schedules).	1.00 0-5	16	3.2500	1.43759	.35940
	2.00 6-10	18	3.2222	1.06027	.24991
	3.00 11+	16	3.1875	1.55858	.38964
	Total	50	3.2200	1.32926	.18799
The perception that the superintendent needs to be an authoritarian rather than a participatory leader.	1.00 0-5	16	2.7500	.93095	.23274
	2.00 6-10	18	2.6111	1.28973	.30399
	3.00 11+	16	2.8125	1.42449	.35612
	Total	50	2.7200	1.21286	.17152
Inadequate compensation for level of responsibility and time commitment.	1.00 0-5	16	3.8125	1.27639	.31910
	2.00 6-10	18	3.1111	1.23140	.29024
	3.00 11+	16	3.6250	1.20416	.30104
	Total	50	3.5000	1.24949	.17670
Professional organizations are not helpful in recruitment and placement of females in the superintendency.	1.00 0-5	16	3.0625	.99791	.24948
	2.00 6-10	18	2.9444	1.05564	.24882
	3.00 11+	16	2.6250	1.14746	.28687
	Total	50	2.8800	1.06215	.15021
Female administrators need to work harder than male administrators to “show” or “prove” they are competent.	1.00 0-5	16	3.3750	1.02470	.25617
	2.00 6-10	18	3.2222	1.47750	.34825
	3.00 11+	16	3.4375	1.50416	.37604
	Total	50	3.3400	1.33417	.18868
Need to relocate.	1.00 0-5	16	3.1250	1.02470	.25617
	2.00 6-10	18	3.2222	.94281	.22222
	3.00 11+	16	2.8750	1.40831	.35208
	Total	50	3.0800	1.12195	.15867
No direct administrative pathway from elementary administration to superintendency.	1.00 0-5	16	2.8750	.88506	.22127
	2.00 6-10	18	3.0556	.99836	.23532
	3.00 11+	16	2.9375	.99791	.24948
	Total	50	2.9600	.94675	.13389
I would prefer to be recruited or offered my next administrative position rather than apply or let my intentions be known.	1.00 0-5	16	2.9375	.99791	.24948
	2.00 6-10	18	2.8333	1.09813	.25883
	3.00 11+	16	2.6250	1.40831	.35208
	Total	50	2.8000	1.16058	.16413
Family concerns, restrictions, obligations.	1.00 0-5	16	4.0625	1.06262	.26566
	2.00 6-10	18	3.7222	1.07406	.25316
	3.00 11+	16	3.6250	1.45488	.36372
	Total	50	3.8000	1.19523	.16903
Female promotions tend to be horizontal reassignments (i.e., new title but same authority).	1.00 0-5	15	3.0667	.88372	.22817
	2.00 6-10	18	3.1111	1.07861	.25423
	3.00 11+	16	3.0625	1.28938	.32234
	Total	49	3.0816	1.07697	.15385

Table 26

Years as Building Principal: ANOVA

ANOVA

Perceived Barrier		Sum of Squares	df	Mean Square	F	Sig.
The perception that the superintendent needs to possess a specific leadership style.	Between Groups	1.035	2	.517	.306	.738
	Within Groups	79.465	47	1.691		
	Total	80.500	49			
A focus towards fiscal management and away from student learning.	Between Groups	.126	2	.063	.043	.958
	Within Groups	68.194	47	1.451		
	Total	68.320	49			
Lack of female role models for women in administrative positions.	Between Groups	1.219	2	.609	.425	.656
	Within Groups	67.361	47	1.433		
	Total	68.580	49			
You need to be a member of the "old boys' club" to become a superintendent.	Between Groups	9.081	2	4.541	2.171	.125
	Within Groups	98.299	47	2.091		
	Total	107.380	49			
Uncertain future of funding for public schools.	Between Groups	1.633	2	.816	.721	.491
	Within Groups	53.188	47	1.132		
	Total	54.820	49			
Lack of preparation programs offered by colleges or professional organizations for ASPIRING female superintendents.	Between Groups	.767	2	.384	.324	.725
	Within Groups	55.653	47	1.184		
	Total	56.420	49			
Female superintendents are not well accepted by community and school board.	Between Groups	1.192	2	.596	.381	.685
	Within Groups	73.528	47	1.564		
	Total	74.720	49			
Accountability pressures.	Between Groups	.023	2	.012	.010	.990
	Within Groups	52.671	46	1.145		
	Total	52.694	48			
Lack of networks and mentorships for female administrators.	Between Groups	5.780	2	2.890	2.139	.129
	Within Groups	63.500	47	1.351		
	Total	69.280	49			
Male faculty have difficulty working with female supervisors.	Between Groups	.067	2	.034	.031	.970
	Within Groups	51.153	47	1.088		
	Total	51.220	49			
Local politics (public, press, community, labor, and school board relations).	Between Groups	2.401	2	1.200	.898	.414
	Within Groups	62.819	47	1.337		
	Total	65.220	49			
Lack of pro-family policies or support services (e.g., childcare, telecommuting, flexible work schedules).	Between Groups	.031	2	.016	.009	.992
	Within Groups	86.549	47	1.841		
	Total	86.580	49			
The perception that the superintendent needs to be an authoritarian rather than a participatory leader.	Between Groups	.365	2	.182	.120	.888
	Within Groups	71.715	47	1.526		
	Total	72.080	49			

Perceived Barrier		Sum of Squares	df	Mean Square	F	Sig.
Inadequate compensation for level of responsibility and time commitment.	Between Groups	4.535	2	2.267	1.481	.238
	Within Groups	71.965	47	1.531		
	Total	76.500	49			
Professional organizations are not helpful in recruitment and placement of females in the superintendency.	Between Groups	1.648	2	.824	.722	.491
	Within Groups	53.632	47	1.141		
	Total	55.280	49			
Female administrators need to work harder than male administrators to "show" or "prove" they are competent.	Between Groups	.421	2	.211	.114	.892
	Within Groups	86.799	47	1.847		
	Total	87.220	49			
Need to relocate.	Between Groups	1.069	2	.534	.414	.663
	Within Groups	60.611	47	1.290		
	Total	61.680	49			
No direct administrative pathway from elementary administration to superintendency.	Between Groups	.288	2	.144	.155	.857
	Within Groups	43.632	47	.928		
	Total	43.920	49			
I would prefer to be recruited or offered my next administrative position rather than apply or let my intentions be known.	Between Groups	.813	2	.406	.293	.747
	Within Groups	65.188	47	1.387		
	Total	66.000	49			
Family concerns, restrictions, obligations.	Between Groups	1.701	2	.851	.585	.561
	Within Groups	68.299	47	1.453		
	Total	70.000	49			
Female promotions tend to be horizontal reassignments (i.e., new title but same authority).	Between Groups	.025	2	.012	.010	.990
	Within Groups	55.649	46	1.210		
	Total	55.673	48			

District size. A one-way ANOVA was completed to determine if statistical differences ($p < .10$) exist between perceived barriers based on school district size. Table 27 and Table 28 display that female principals working within large school districts considered five barriers as statistically significant ($p < .10$) compared to female principals working in all other sized districts. The barriers considered significant were, 1. *A focus towards fiscal management and away from student learning*, (Intrapersonal) ($p = .037$) 2. *Lack of preparation programs offered by colleges or professional organizations for ASPIRING female superintendents*, (Structural) ($p = .021$) 3. *Female superintendents are not well accepted by community and school board*, (Sociocultural) ($p = .057$) 4. *No direct*

administrative pathway from elementary administration to superintendency, (Structural) (p =.014) 5. *Female promotions tend to be horizontal reassignments (i.e., new title but same authority)* (Structural) (p = .058).

There was a significant effect of *A focus toward fiscal management* on district size at the p<.10 level for the conditions [F (3, 44) = 3.08, p = .037]. Post hoc comparisons using Bonferroni's procedure indicated that the mean score for female principals in large districts (M = 4.33, SD = 0.70) was significantly different than principals serving very small districts (M = 3.08 and SD = 1.44) and principals serving middle sized districts (M = 3.00 and SD = 1.08). However, the principals serving small districts (M = 3.64, SD = 1.08) did not significantly differ from large district principals. These results suggest female principals working in these large districts more often consider *A focus toward fiscal management* as a barrier to the superintendency than their counterparts in other sized districts, very small and middle sized.

There was a significant effect of *Lack of preparation programs* on district size at the p<.10 level for the conditions [F (3, 44) = 3.57, p = .021]. Post hoc comparisons using Bonferroni's procedure indicated that the mean score for female principals in large districts (M = 3.33, SD = 1.22) was significantly different compared to principals in small districts (M = 2.14 and SD = 0.66). However, the principals serving very small districts (M = 2.92, SD = 1.08) and middle sized districts (M= 2.31, SD = 0.95) did not significantly differ from large district principals. These results suggest the structural barrier, *Lack of preparation programs*, was perceived as more formidable for principals working in large districts as compared to principals in small districts.

There was a significant effect of *Female superintendents are not well accepted* on district size at the p<.10 level for the conditions [F (3, 44) = 2.70, p = .057]. Post hoc comparisons using Bonferroni's procedure indicated that the mean score for female principals in large districts (M = 3.78, SD = 1.09) was significantly different than principals serving small districts (M = 2.50 and SD = 0.94). However, the principals serving very small districts (M = 2.58, SD = 0.90) and principals serving middle sized districts (M = 2.77 and SD = 1.48) did not significantly differ from large district principals. These results suggest that large district principals more often identify the sociocultural barrier, *Female superintendents are not well accepted*, as a barrier to the superintendency than their counterparts in small districts.

There was a significant effect of *No direct pathway from elementary* on district size at the p<.10 level for the conditions [F (3, 44) = 3.97, p = .014]. Post hoc comparisons using Bonferroni's procedure indicated that the mean score for female principals in large districts (M = 3.78, SD = 0.67) was significantly different than principals serving very small districts (M = 2.50 and SD = 0.80) However, the principals serving small districts (M = 3.00, SD = 0.88) and principals serving middle sized districts (M = 2.92 and SD = 0.95) did not significantly differ from large district principals. These results suggest principals employed in large districts found the structural barrier, *No direct pathway from elementary*, more formidable to superintendent aspiration than principals employed in very small districts.

There was a significant effect of *Female promotions tend to be horizontal* on district size at the p<.10 level for the conditions [F (3, 43) = 2.69, p = .058]. Post hoc comparisons using Bonferroni's procedure indicated that the mean score for female

principals in large districts (M = 3.78, SD = 1.20) was significantly different than principals serving very small districts (M = 2.50 and SD = 0.80) However, the principals serving small districts (M = 3.15, SD = 0.90) and principals serving middle sized districts (M = 3.08 and SD = 1.19) did not significantly differ from large district principals. Similar to the barrier, *No direct pathway from the elementary*, the structural barrier, *Female promotions tend to be horizontal,* may be more formidable principals in large district in aspiring to the superintendency, than principals employed in very small districts.

Table 27

One-Way ANOVA: Group Statistics for District Enrollment

Perceived Barrier	District enrollment	N	Mean	Std. Deviation	Std. Error
The perception that the superintendent needs to possess a specific leadership style.	1.00 0-1500	12	2.9167	1.50504	.43447
	2.00 1,501-3,000	14	3.4286	1.08941	.29116
	3.00 3,001-5,000	13	3.1538	1.40512	.38971
	4.00 More than 5,000	9	3.7778	1.20185	.40062
	Total	48	3.2917	1.30398	.18821
A focus towards fiscal management and away from student learning.	1.00 0-1500	12	3.0833	1.44338	.41667
	2.00 1,501-3,000	14	3.6429	1.08182	.28913
	3.00 3,001-5,000	13	3.0000	1.08012	.29957
	4.00 More than 5,000	9	4.3333	.70711	.23570
	Total	48	3.4583	1.20210	.17351
Lack of female role models for women in administrative positions.	1.00 0-1500	12	2.7500	.86603	.25000
	2.00 1,501-3,000	14	2.7143	1.26665	.33853
	3.00 3,001-5,000	13	2.5385	1.39137	.38590
	4.00 More than 5,000	9	3.1111	1.26930	.42310
	Total	48	2.7500	1.19396	.17233
You need to be a member of the "old boys' club" to become a superintendent.	1.00 0-1500	12	3.0000	1.34840	.38925
	2.00 1,501-3,000	14	2.9286	1.26881	.33910
	3.00 3,001-5,000	13	3.2308	1.64083	.45508
	4.00 More than 5,000	9	3.7778	1.64148	.54716
	Total	48	3.1875	1.45363	.20981

Perceived Barrier	District enrollment	N	Mean	Std. Deviation	Std. Error
Uncertain future of funding for public schools.	1.00 0-1500	12	3.2500	.75378	.21760
	2.00 1,501-3,000	14	3.2143	1.12171	.29979
	3.00 3,001-5,000	13	3.1538	1.28103	.35529
	4.00 More than 5,000	9	2.6667	.86603	.28868
	Total	48	3.1042	1.03635	.14958
Lack of preparation programs offered by colleges or professional organizations for ASPIRING female superintendents.	1.00 0-1500	12	2.9167	1.08362	.31282
	2.00 1,501-3,000	14	2.1429	.66299	.17719
	3.00 3,001-5,000	13	2.3077	.94733	.26274
	4.00 More than 5,000	9	3.3333	1.22474	.40825
	Total	48	2.6042	1.04657	.15106
Female superintendents are not well accepted by community and school board.	1.00 0-1500	12	2.5833	.90034	.25990
	2.00 1,501-3,000	14	2.5000	.94054	.25137
	3.00 3,001-5,000	13	2.7692	1.48064	.41066
	4.00 More than 5,000	9	3.7778	1.09291	.36430
	Total	48	2.8333	1.19098	.17190
Accountability pressures.	1.00 0-1500	12	3.0833	.90034	.25990
	2.00 1,501-3,000	14	3.3571	1.15073	.30755
	3.00 3,001-5,000	13	3.2308	1.01274	.28088
	4.00 More than 5,000	8	3.1250	1.12599	.39810
	Total	47	3.2128	1.02015	.14880
Lack of networks and mentorships for female administrators.	1.00 0-1500	12	2.9167	.99620	.28758
	2.00 1,501-3,000	14	3.0000	.87706	.23440
	3.00 3,001-5,000	13	2.3846	1.44559	.40094
	4.00 More than 5,000	9	3.4444	1.42400	.47467
	Total	48	2.8958	1.20706	.17422
Male faculty have difficulty working with female supervisors.	1.00 0-1500	12	2.2500	.86603	.25000
	2.00 1,501-3,000	14	2.0714	.82874	.22149
	3.00 3,001-5,000	13	2.3077	1.10940	.30769
	4.00 More than 5,000	9	2.8889	1.16667	.38889
	Total	48	2.3333	.99645	.14382
Local politics (public, press, community, labor, and school board relations).	1.00 0-1500	12	3.5000	1.24316	.35887
	2.00 1,501-3,000	14	3.6429	1.00821	.26945
	3.00 3,001-5,000	13	3.6923	1.31559	.36488
	4.00 More than 5,000	9	4.2222	.66667	.22222
	Total	48	3.7292	1.10588	.15962
Lack of pro-family policies or support services (e.g., childcare, telecommuting, flexible work schedules).	1.00 0-1500	12	2.9167	1.31137	.37856
	2.00 1,501-3,000	14	3.6429	1.27745	.34141
	3.00 3,001-5,000	13	3.2308	1.36344	.37815
	4.00 More than 5,000	9	3.4444	1.13039	.37680
	Total	48	3.3125	1.27423	.18392

Perceived Barrier	District enrollment	N	Mean	Std. Deviation	Std. Error
The perception that the superintendent needs to be an authoritarian rather than a participatory leader.	1.00 0-1500	12	2.4167	1.24011	.35799
	2.00 1,501-3,000	14	2.5714	1.01635	.27163
	3.00 3,001-5,000	13	2.6154	1.32530	.36757
	4.00 More than 5,000	9	3.4444	1.23603	.41201
	Total	48	2.7083	1.21967	.17604
Inadequate compensation for level of responsibility and time commitment.	1.00 0-1500	12	3.0833	1.31137	.37856
	2.00 1,501-3,000	14	3.9286	.99725	.26653
	3.00 3,001-5,000	13	3.6923	1.31559	.36488
	4.00 More than 5,000	9	3.5556	1.13039	.37680
	Total	48	3.5833	1.19988	.17319
Professional organizations are not helpful in recruitment and placement of females in the superintendency.	1.00 0-1500	12	2.7500	1.05529	.30464
	2.00 1,501-3,000	14	3.0000	1.03775	.27735
	3.00 3,001-5,000	13	2.6923	.94733	.26274
	4.00 More than 5,000	9	3.4444	1.13039	.37680
	Total	48	2.9375	1.03977	.15008
Female administrators need to work harder than male administrators to "show" or "prove" they are competent.	1.00 0-1500	12	3.0000	1.27920	.36927
	2.00 1,501-3,000	14	3.1429	1.16732	.31198
	3.00 3,001-5,000	13	3.3077	1.65250	.45832
	4.00 More than 5,000	9	4.1111	.92796	.30932
	Total	48	3.3333	1.32622	.19142
Need to relocate.	1.00 0-1500	12	2.8333	1.02986	.29729
	2.00 1,501-3,000	14	3.1429	1.02711	.27451
	3.00 3,001-5,000	13	3.0000	1.29099	.35806
	4.00 More than 5,000	9	3.6667	1.00000	.33333
	Total	48	3.1250	1.10367	.15930
No direct administrative pathway from elementary administration to superintendency.	1.00 0-1500	12	2.5000	.79772	.23028
	2.00 1,501-3,000	14	3.0000	.87706	.23440
	3.00 3,001-5,000	13	2.9231	.95407	.26461
	4.00 More than 5,000	9	3.7778	.66667	.22222
	Total	48	3.0000	.92253	.13316
I would prefer to be recruited or offered my next administrative position rather than apply or let my intentions be known.	1.00 0-1500	12	2.9167	.99620	.28758
	2.00 1,501-3,000	14	2.7857	1.36880	.36583
	3.00 3,001-5,000	13	2.6154	1.19293	.33086
	4.00 More than 5,000	9	3.3333	.70711	.23570
	Total	48	2.8750	1.12278	.16206
Family concerns, restrictions, obligations.	1.00 0-1500	12	3.4167	1.24011	.35799
	2.00 1,501-3,000	14	4.0714	.99725	.26653
	3.00 3,001-5,000	13	3.9231	1.38212	.38333
	4.00 More than 5,000	9	4.0000	.86603	.28868
	Total	48	3.8542	1.14835	.16575

Perceived Barrier	District enrollment	N	Mean	Std. Deviation	Std. Error
Female promotions tend to be horizontal reassignments (i.e., new title but same authority).	1.00 0-1500	12	2.5000	.79772	.23028
	2.00 1,501-3,000	13	3.1538	.89872	.24926
	3.00 3,001-5,000	13	3.0769	1.18754	.32936
	4.00 More than 5,000	9	3.7778	1.20185	.40062
	Total	47	3.0851	1.08005	.15754

Table 28

District Enrollment: ANOVA

ANOVA

Perceived Barrier		Sum of Squares	df	Mean Square	F	Sig.
The perception that the superintendent needs to possess a specific leadership style.	Between Groups	4.324	3	1.441	.839	.480
	Within Groups	75.593	44	1.718		
	Total	79.917	47			
A focus towards fiscal management and away from student learning.	Between Groups	11.786	3	3.929	3.080	**.037***
	Within Groups	56.131	44	1.276		
	Total	67.917	47			
Lack of female role models for women in administrative positions.	Between Groups	1.773	3	.591	.399	.755
	Within Groups	65.227	44	1.482		
	Total	67.000	47			
You need to be a member of the "old boys' club" to become a superintendent.	Between Groups	4.521	3	1.507	.699	.557
	Within Groups	94.792	44	2.154		
	Total	99.313	47			
Uncertain future of funding for public schools.	Between Groups	2.180	3	.727	.662	.580
	Within Groups	48.299	44	1.098		
	Total	50.479	47			
Lack of preparation programs offered by colleges or professional organizations for ASPIRING female superintendents.	Between Groups	10.079	3	3.360	3.571	**.021***
	Within Groups	41.400	44	.941		
	Total	51.479	47			
Female superintendents are not well accepted by community and school board.	Between Groups	10.387	3	3.462	2.707	**.057***
	Within Groups	56.280	44	1.279		
	Total	66.667	47			
Accountability pressures.	Between Groups	.559	3	.186	.169	.917
	Within Groups	47.314	43	1.100		
	Total	47.872	46			
Lack of networks and mentorships for female administrators.	Between Groups	6.263	3	2.088	1.477	.234
	Within Groups	62.216	44	1.414		
	Total	68.479	47			
Male faculty have difficulty working with female supervisors.	Between Groups	3.830	3	1.277	1.311	.283
	Within Groups	42.837	44	.974		
	Total	46.667	47			

Perceived Barrier		Sum of Squares	df	Mean Square	F	Sig.
Local politics (public, press, community, labor, and school board relations).	Between Groups	2.940	3	.980	.791	.506
	Within Groups	54.539	44	1.240		
	Total	57.479	47			
Lack of pro-family policies or support services (e.g., childcare, telecommuting, flexible work schedules).	Between Groups	3.652	3	1.217	.737	.536
	Within Groups	72.661	44	1.651		
	Total	76.313	47			
The perception that the superintendent needs to be an authoritarian rather than a participatory leader.	Between Groups	6.272	3	2.091	1.445	.242
	Within Groups	63.644	44	1.446		
	Total	69.917	47			
Inadequate compensation for level of responsibility and time commitment.	Between Groups	4.830	3	1.610	1.127	.348
	Within Groups	62.837	44	1.428		
	Total	67.667	47			
Professional organizations are not helpful in recruitment and placement of females in the superintendency.	Between Groups	3.571	3	1.190	1.109	.356
	Within Groups	47.241	44	1.074		
	Total	50.813	47			
Female administrators need to work harder than male administrators to "show" or "prove" they are competent.	Between Groups	7.294	3	2.431	1.419	.250
	Within Groups	75.372	44	1.713		
	Total	82.667	47			
Need to relocate.	Between Groups	3.869	3	1.290	1.063	.374
	Within Groups	53.381	44	1.213		
	Total	57.250	47			
No direct administrative pathway from elementary administration to superintendency.	Between Groups	8.521	3	2.840	3.970	**.014***
	Within Groups	31.479	44	.715		
	Total	40.000	47			
I would prefer to be recruited or offered my next administrative position rather than apply or let my intentions be known.	Between Groups	2.899	3	.966	.755	.526
	Within Groups	56.351	44	1.281		
	Total	59.250	47			
Family concerns, restrictions, obligations.	Between Groups	3.211	3	1.070	.801	.500
	Within Groups	58.768	44	1.336		
	Total	61.979	47			
Female promotions tend to be horizontal reassignments (i.e., new title but same authority).	Between Groups	8.489	3	2.830	2.694	**.058***
	Within Groups	45.171	43	1.050		
	Total	53.660	46			

Building size. Because district size is not always an indicator of building enrollments, a one-way ANOVA was completed to determine if statistical differences ($p < .10$) exist between perceived barriers based varying building enrollments. Table 10.

Table 29 and Table 30 display that the difference in mean scores was significant ($p < 1.0$) for two of the perceived barriers.

There was a significant effect of the structural barrier *Professional organizations are not helpful in recruitment and placement of females in the superintendency* on building enrollments at the $p<.10$ level for the conditions [$F(2, 47) = 3.35$, $p = .044$]. Post hoc comparisons using Bonferroni's procedure indicated that the mean score for the small building principals ($M = 3.60$, $SD = 0.84$) was significantly different than principals supervising medium sized buildings ($M = 2.64$, $SD = 1.01$) However, principals in buildings with large enrollments ($M = 2.89$, $SD = 1.67$) did not significantly differ from small building principals or medium sized building principals. These results suggest the structural barrier, *Professional organizations are not helpful in recruitment and placement of females in the superintendency*, was found more formidable to principals supervising small building as compared to principals supervising medium sized buildings.

There was a significant effect of the intrapersonal barrier, *Need to relocate* on building enrollments at the $p<.10$ level for the conditions [$F(2, 47) = 3.34$, $p = .044$]. Post hoc comparisons using Bonferroni's procedure indicated that the mean score for the principals supervising medium sized buildings ($M = 3.35$, $SD = 1.17$) was significantly different than the principals in buildings with large enrollments ($M = 2.33$, $SD = 0.70$). However, the small enrollment building ($M = 2.90$, $SD = 0.99$) did not significantly differ from medium sized building principals. These results suggest principals supervising medium sized buildings were more likely to identify *Need to relocate* as a barrier to the

superintendency than their counterparts supervising building with large student enrollments.

Table 29

One-Way ANOVA: Group Statistics for Building Enrollment

Perceived Barrier	Building Enrollment	N	Mean	Std. Deviation	Std. Error
The perception that the superintendent needs to possess a specific leadership style.	1.00 1-299	10	3.5000	1.26930	.40139
	2.00 300-599	31	3.1613	1.31901	.23690
	3.00 600+	9	3.5556	1.23603	.41201
	Total	50	3.3000	1.28174	.18127
A focus towards fiscal management and away from student learning.	1.00 1-299	10	3.6000	1.34990	.42687
	2.00 300-599	31	3.4194	1.23218	.22131
	3.00 600+	9	3.3333	.86603	.28868
	Total	50	3.4400	1.18080	.16699
Lack of female role models for women in administrative positions.	1.00 1-299	10	3.3000	1.25167	.39581
	2.00 300-599	31	2.6129	1.11587	.20042
	3.00 600+	9	2.7778	1.30171	.43390
	Total	50	2.7800	1.18304	.16731
You need to be a member of the "old boys' club" to become a superintendent.	1.00 1-299	10	4.0000	1.41421	.44721
	2.00 300-599	31	2.9032	1.53525	.27574
	3.00 600+	9	3.2222	1.09291	.36430
	Total	50	3.1800	1.48035	.20935
Uncertain future of funding for public schools.	1.00 1-299	10	2.8000	1.03280	.32660
	2.00 300-599	31	3.0323	1.04830	.18828
	3.00 600+	9	3.4444	1.13039	.37680
	Total	50	3.0600	1.05772	.14958
Lack of preparation programs offered by colleges or professional organizations for ASPIRING female superintendents.	1.00 1-299	10	2.9000	1.37032	.43333
	2.00 300-599	31	2.5806	1.05749	.18993
	3.00 600+	9	2.0000	.50000	.16667
	Total	50	2.5400	1.07305	.15175
Female superintendents are not well accepted by community and school board.	1.00 1-299	10	3.5000	1.17851	.37268
	2.00 300-599	31	2.7419	1.26406	.22703
	3.00 600+	9	2.4444	1.01379	.33793
	Total	50	2.8400	1.23487	.17464
Accountability pressures.	1.00 1-299	10	2.9000	1.10050	.34801
	2.00 300-599	30	3.2000	1.09545	.20000
	3.00 600+	9	3.3333	.86603	.28868
	Total	49	3.1633	1.04775	.14968

Perceived Barrier	Building Enrollment	N	Mean	Std. Deviation	Std. Error
Lack of networks and mentorships for female administrators.	1.00 1-299	10	3.4000	1.50555	.47610
	2.00 300-599	31	2.6774	1.07663	.19337
	3.00 600+	9	3.0000	1.11803	.37268
	Total	50	2.8800	1.18907	.16816
Male faculty have difficulty working with female supervisors.	1.00 1-299	10	2.6000	1.26491	.40000
	2.00 300-599	31	2.2903	1.00643	.18076
	3.00 600+	9	2.2222	.83333	.27778
	Total	50	2.3400	1.02240	.14459
Local politics (public, press, community, labor, and school board relations).	1.00 1-299	10	3.7000	1.05935	.33500
	2.00 300-599	31	3.7097	1.21638	.21847
	3.00 600+	9	3.4444	1.13039	.37680
	Total	50	3.6600	1.15370	.16316
Lack of pro-family policies or support services (e.g., childcare, telecommuting, flexible work schedules).	1.00 1-299	10	3.4000	1.26491	.40000
	2.00 300-599	31	3.1613	1.36862	.24581
	3.00 600+	9	3.2222	1.39443	.46481
	Total	50	3.2200	1.32926	.18799
The perception that the superintendent needs to be an authoritarian rather than a participatory leader.	1.00 1-299	10	3.0000	1.24722	.39441
	2.00 300-599	31	2.6774	1.27507	.22901
	3.00 600+	9	2.5556	1.01379	.33793
	Total	50	2.7200	1.21286	.17152
Inadequate compensation for level of responsibility and time commitment.	1.00 1-299	10	3.7000	1.33749	.42295
	2.00 300-599	31	3.4516	1.20661	.21671
	3.00 600+	9	3.4444	1.42400	.47467
	Total	50	3.5000	1.24949	.17670
Professional organizations are not helpful in recruitment and placement of females in the superintendency.	1.00 1-299	10	3.6000	.84327	.26667
	2.00 300-599	31	2.6452	1.01812	.18286
	3.00 600+	9	2.8889	1.16667	.38889
	Total	50	2.8800	1.06215	.15021
Female administrators need to work harder than male administrators to “show” or “prove” they are competent.	1.00 1-299	10	3.9000	1.10050	.34801
	2.00 300-599	31	3.1290	1.40812	.25291
	3.00 600+	9	3.4444	1.23603	.41201
	Total	50	3.3400	1.33417	.18868
Need to relocate.	1.00 1-299	10	2.9000	.99443	.31447
	2.00 300-599	31	3.3548	1.17042	.21021
	3.00 600+	9	2.3333	.70711	.23570
	Total	50	3.0800	1.12195	.15867
No direct administrative pathway from elementary administration to superintendency.	1.00 1-299	10	3.3000	.94868	.30000
	2.00 300-599	31	2.9032	1.01176	.18172
	3.00 600+	9	2.7778	.66667	.22222
	Total	50	2.9600	.94675	.13389
I would prefer to be recruited or offered my next administrative position rather than apply or let my intentions be known.	1.00 1-299	10	2.8000	1.03280	.32660
	2.00 300-599	31	2.7742	1.23044	.22099
	3.00 600+	9	2.8889	1.16667	.38889
	Total	50	2.8000	1.16058	.16413

Perceived Barrier	Building Enrollment	N	Mean	Std. Deviation	Std. Error
Family concerns, restrictions, obligations.	1.00 1-299	10	3.8000	1.39841	.44222
	2.00 300-599	31	3.8387	1.18594	.21300
	3.00 600+	9	3.6667	1.11803	.37268
	Total	50	3.8000	1.19523	.16903
Female promotions tend to be horizontal reassignments (i.e., new title but same authority).	1.00 1-299	10	3.6000	.96609	.30551
	2.00 300-599	30	2.8667	1.10589	.20191
	3.00 600+	9	3.2222	.97183	.32394
	Total	49	3.0816	1.07697	.15385

Table 30

Building Enrollment: ANOVA

ANOVA

Perceived Barrier		Sum of Squares	df	Mean Square	F	Sig.
The perception that the superintendent needs to possess a specific leadership style.	Between Groups	1.584	2	.792	.472	.627
	Within Groups	78.916	47	1.679		
	Total	80.500	49			
A focus towards fiscal management and away from student learning.	Between Groups	.372	2	.186	.129	.880
	Within Groups	67.948	47	1.446		
	Total	68.320	49			
Lack of female role models for women in administrative positions.	Between Groups	3.570	2	1.785	1.290	.285
	Within Groups	65.010	47	1.383		
	Total	68.580	49			
You need to be a member of the “old boys’ club” to become a superintendent.	Between Groups	9.115	2	4.557	2.180	.124
	Within Groups	98.265	47	2.091		
	Total	107.380	49			
Uncertain future of funding for public schools.	Between Groups	2.030	2	1.015	.904	.412
	Within Groups	52.790	47	1.123		
	Total	54.820	49			
Lack of preparation programs offered by colleges or professional organizations for ASPIRING female superintendents.	Between Groups	3.972	2	1.986	1.780	.180
	Within Groups	52.448	47	1.116		
	Total	56.420	49			
Female superintendents are not well accepted by community and school board.	Between Groups	6.062	2	3.031	2.075	.137
	Within Groups	68.658	47	1.461		
	Total	74.720	49			
Accountability pressures.	Between Groups	.994	2	.497	.442	.645
	Within Groups	51.700	46	1.124		
	Total	52.694	48			
Lack of networks and mentorships for female administrators.	Between Groups	4.106	2	2.053	1.480	.238
	Within Groups	65.174	47	1.387		
	Total	69.280	49			

Perceived Barrier		Sum of Squares	df	Mean Square	F	Sig.
Male faculty have difficulty working with female supervisors.	Between Groups	.877	2	.439	.410	.666
	Within Groups	50.343	47	1.071		
	Total	51.220	49			
Local politics (public, press, community, labor, and school board relations).	Between Groups	.511	2	.255	.185	.831
	Within Groups	64.709	47	1.377		
	Total	65.220	49			
Lack of pro-family policies or support services (e.g., childcare, telecommuting, flexible work schedules).	Between Groups	.431	2	.215	.118	.889
	Within Groups	86.149	47	1.833		
	Total	86.580	49			
The perception that the superintendent needs to be an authoritarian rather than a participatory leader.	Between Groups	1.084	2	.542	.359	.701
	Within Groups	70.996	47	1.511		
	Total	72.080	49			
Inadequate compensation for level of responsibility and time commitment.	Between Groups	.500	2	.250	.155	.857
	Within Groups	76.000	47	1.617		
	Total	76.500	49			
Professional organizations are not helpful in recruitment and placement of females in the superintendency.	Between Groups	6.894	2	3.447	3.348	**.044***
	Within Groups	48.386	47	1.029		
	Total	55.280	49			
Female administrators need to work harder than male administrators to "show" or "prove" they are competent.	Between Groups	4.614	2	2.307	1.313	.279
	Within Groups	82.606	47	1.758		
	Total	87.220	49			
Need to relocate.	Between Groups	7.683	2	3.842	3.344	**.044***
	Within Groups	53.997	47	1.149		
	Total	61.680	49			
No direct administrative pathway from elementary administration to superintendency.	Between Groups	1.555	2	.777	.862	.429
	Within Groups	42.365	47	.901		
	Total	43.920	49			
I would prefer to be recruited or offered my next administrative position rather than apply or let my intentions be known.	Between Groups	.092	2	.046	.033	.968
	Within Groups	65.908	47	1.402		
	Total	66.000	49			
Family concerns, restrictions, obligations.	Between Groups	.206	2	.103	.070	.933
	Within Groups	69.794	47	1.485		
	Total	70.000	49			
Female promotions tend to be horizontal reassignments (i.e., new title but same authority).	Between Groups	4.251	2	2.126	1.901	.161
	Within Groups	51.422	46	1.118		
	Total	55.673	48			

Age. A one-way ANOVA was completed to determine if statistical differences ($p < .10$) exist between perceived barriers based on a principal's age. Table 31 and Table

32 display that the differences in mean scores was not significant for the three age groups for any of the perceived barriers.

Table 31

One-Way ANOVA: Group Statistics for Principal's Age

Perceived Barrier	Principal's Age	N	Mean	Std. Deviation	Std. Error
The perception that the superintendent needs to possess a specific leadership style.	1.00 30-40	12	3.3333	1.30268	.37605
	2.00 41-50	29	3.2069	1.34641	.25002
	3.00 51+	9	3.5556	1.13039	.37680
	Total	50	3.3000	1.28174	.18127
A focus towards fiscal management and away from student learning.	1.00 30-40	12	3.2500	1.42223	.41056
	2.00 41-50	29	3.3448	1.14255	.21217
	3.00 51+	9	4.0000	.86603	.28868
	Total	50	3.4400	1.18080	.16699
Lack of female role models for women in administrative positions.	1.00 30-40	12	2.7500	1.35680	.39167
	2.00 41-50	29	2.7241	1.19213	.22137
	3.00 51+	9	3.0000	1.00000	.33333
	Total	50	2.7800	1.18304	.16731
You need to be a member of the "old boys' club" to become a superintendent.	1.00 30-40	12	3.0833	1.50504	.43447
	2.00 41-50	29	3.1379	1.48141	.27509
	3.00 51+	9	3.4444	1.58990	.52997
	Total	50	3.1800	1.48035	.20935
Uncertain future of funding for public schools.	1.00 30-40	12	3.3333	1.07309	.30977
	2.00 41-50	29	2.8621	1.05979	.19680
	3.00 51+	9	3.3333	1.00000	.33333
	Total	50	3.0600	1.05772	.14958
Lack of preparation programs offered by colleges or professional organizations for ASPIRING female superintendents.	1.00 30-40	12	2.6667	1.30268	.37605
	2.00 41-50	29	2.3448	.85673	.15909
	3.00 51+	9	3.0000	1.32288	.44096
	Total	50	2.5400	1.07305	.15175
Female superintendents are not well accepted by community and school board.	1.00 30-40	12	2.5833	1.31137	.37856
	2.00 41-50	29	3.0345	1.20957	.22461
	3.00 51+	9	2.5556	1.23603	.41201
	Total	50	2.8400	1.23487	.17464
Accountability pressures.	1.00 30-40	12	2.9167	1.08362	.31282
	2.00 41-50	28	3.2500	1.07583	.20331
	3.00 51+	9	3.2222	.97183	.32394
	Total	49	3.1633	1.04775	.14968

Perceived Barrier	Principal's Age	N	Mean	Std. Deviation	Std. Error
Lack of networks and mentorships for female administrators.	1.00 30-40	12	2.8333	1.40346	.40514
	2.00 41-50	29	2.8966	1.17549	.21828
	3.00 51+	9	2.8889	1.05409	.35136
	Total	50	2.8800	1.18907	.16816
Male faculty have difficulty working with female supervisors.	1.00 30-40	12	2.3333	1.30268	.37605
	2.00 41-50	29	2.3793	.97884	.18177
	3.00 51+	9	2.2222	.83333	.27778
	Total	50	2.3400	1.02240	.14459
Local politics (public, press, community, labor, and school board relations).	1.00 30-40	12	3.7500	1.13818	.32856
	2.00 41-50	29	3.5172	1.15328	.21416
	3.00 51+	9	4.0000	1.22474	.40825
	Total	50	3.6600	1.15370	.16316
Lack of pro-family policies or support services (e.g., childcare, telecommuting, flexible work schedules).	1.00 30-40	12	3.4167	1.50504	.43447
	2.00 41-50	29	3.0345	1.20957	.22461
	3.00 51+	9	3.5556	1.50923	.50308
	Total	50	3.2200	1.32926	.18799
The perception that the superintendent needs to be an authoritarian rather than a participatory leader.	1.00 30-40	12	3.1667	1.19342	.34451
	2.00 41-50	29	2.4828	1.15328	.21416
	3.00 51+	9	2.8889	1.36423	.45474
	Total	50	2.7200	1.21286	.17152
Inadequate compensation for level of responsibility and time commitment.	1.00 30-40	12	3.6667	1.43548	.41439
	2.00 41-50	29	3.3793	1.17758	.21867
	3.00 51+	9	3.6667	1.32288	.44096
	Total	50	3.5000	1.24949	.17670
Professional organizations are not helpful in recruitment and placement of females in the superintendency.	1.00 30-40	12	2.6667	1.07309	.30977
	2.00 41-50	29	2.8966	1.11307	.20669
	3.00 51+	9	3.1111	.92796	.30932
	Total	50	2.8800	1.06215	.15021
Female administrators need to work harder than male administrators to "show" or "prove" they are competent.	1.00 30-40	12	3.5000	1.31426	.37939
	2.00 41-50	29	3.3103	1.31213	.24366
	3.00 51+	9	3.2222	1.56347	.52116
	Total	50	3.3400	1.33417	.18868
Need to relocate.	1.00 30-40	12	3.1667	1.26730	.36584
	2.00 41-50	29	3.1724	1.13606	.21096
	3.00 51+	9	2.6667	.86603	.28868
	Total	50	3.0800	1.12195	.15867
No direct administrative pathway from elementary administration to superintendency.	1.00 30-40	12	2.6667	.98473	.28427
	2.00 41-50	29	2.9310	.99753	.18524
	3.00 51+	9	3.4444	.52705	.17568
	Total	50	2.9600	.94675	.13389
I would prefer to be recruited or offered my next administrative position rather than apply or let my intentions be known.	1.00 30-40	12	2.6667	1.07309	.30977
	2.00 41-50	29	2.9310	1.19317	.22157
	3.00 51+	9	2.5556	1.23603	.41201
	Total	50	2.8000	1.16058	.16413

Perceived Barrier	Principal's Age	N	Mean	Std. Deviation	Std. Error
Family concerns, restrictions, obligations.	1.00 30-40	12	4.2500	1.35680	.39167
	2.00 41-50	29	3.6207	1.17758	.21867
	3.00 51+	9	3.7778	.97183	.32394
	Total	50	3.8000	1.19523	.16903
Female promotions tend to be horizontal reassignments (i.e., new title but same authority).	1.00 30-40	12	3.3333	.98473	.28427
	2.00 41-50	28	3.1071	1.10014	.20791
	3.00 51+	9	2.6667	1.11803	.37268
	Total	49	3.0816	1.07697	.15385

Table 32

Principal's Age: ANOVA

ANOVA

Perceived Barrier		Sum of Squares	df	Mean Square	F	Sig.
The perception that the superintendent needs to possess a specific leadership style.	Between Groups	.852	2	.426	.252	.779
	Within Groups	79.648	47	1.695		
	Total	80.500	49			
A focus towards fiscal management and away from student learning.	Between Groups	3.518	2	1.759	1.276	.289
	Within Groups	64.802	47	1.379		
	Total	68.320	49			
Lack of female role models for women in administrative positions.	Between Groups	.537	2	.268	.185	.831
	Within Groups	68.043	47	1.448		
	Total	68.580	49			
You need to be a member of the "old boys' club" to become a superintendent.	Between Groups	.793	2	.396	.175	.840
	Within Groups	106.587	47	2.268		
	Total	107.380	49			
Uncertain future of funding for public schools.	Between Groups	2.705	2	1.353	1.220	.304
	Within Groups	52.115	47	1.109		
	Total	54.820	49			
Lack of preparation programs offered by colleges or professional organizations for ASPIRING female superintendents.	Between Groups	3.202	2	1.601	1.414	.253
	Within Groups	53.218	47	1.132		
	Total	56.420	49			
Female superintendents are not well accepted by community and school board.	Between Groups	2.616	2	1.308	.852	.433
	Within Groups	72.104	47	1.534		
	Total	74.720	49			
Accountability pressures.	Between Groups	.972	2	.486	.432	.652
	Within Groups	51.722	46	1.124		
	Total	52.694	48			
Lack of networks and mentorships for female administrators.	Between Groups	.035	2	.017	.012	.988
	Within Groups	69.245	47	1.473		
	Total	69.280	49			

Perceived Barrier		Sum of Squares	df	Mean Square	F	Sig.
Male faculty have difficulty working with female supervisors.	Between Groups	.170	2	.085	.078	.925
	Within Groups	51.050	47	1.086		
	Total	51.220	49			
Local politics (public, press, community, labor, and school board relations).	Between Groups	1.729	2	.864	.640	.532
	Within Groups	63.491	47	1.351		
	Total	65.220	49			
Lack of pro-family policies or support services (e.g., childcare, telecommuting, flexible work schedules).	Between Groups	2.476	2	1.238	.692	.506
	Within Groups	84.104	47	1.789		
	Total	86.580	49			
The perception that the superintendent needs to be an authoritarian rather than a participatory leader.	Between Groups	4.283	2	2.142	1.485	.237
	Within Groups	67.797	47	1.442		
	Total	72.080	49			
Inadequate compensation for level of responsibility and time commitment.	Between Groups	1.006	2	.503	.313	.733
	Within Groups	75.494	47	1.606		
	Total	76.500	49			
Professional organizations are not helpful in recruitment and placement of females in the superintendency.	Between Groups	1.035	2	.517	.448	.641
	Within Groups	54.245	47	1.154		
	Total	55.280	49			
Female administrators need to work harder than male administrators to “show” or “prove” they are competent.	Between Groups	.458	2	.229	.124	.884
	Within Groups	86.762	47	1.846		
	Total	87.220	49			
Need to relocate.	Between Groups	1.875	2	.938	.737	.484
	Within Groups	59.805	47	1.272		
	Total	61.680	49			
No direct administrative pathway from elementary administration to superintendency.	Between Groups	3.169	2	1.585	1.828	.172
	Within Groups	40.751	47	.867		
	Total	43.920	49			
I would prefer to be recruited or offered my next administrative position rather than apply or let my intentions be known.	Between Groups	1.249	2	.625	.453	.638
	Within Groups	64.751	47	1.378		
	Total	66.000	49			
Family concerns, restrictions, obligations.	Between Groups	3.367	2	1.683	1.187	.314
	Within Groups	66.633	47	1.418		
	Total	70.000	49			
Female promotions tend to be horizontal reassignments (i.e., new title but same authority).	Between Groups	2.328	2	1.164	1.004	.374
	Within Groups	53.345	46	1.160		
	Total	55.673	48			

Building type. An independent samples *t* test was conducted to compare perceived barriers to the superintendency for principals working in elementary (K—8) buildings and high school buildings (9-12), as displayed in Table 33 and Table 34. The equal variance assumption has been satisfied. Based on the results of the independent samples *t* test, there was a significant difference in the scores for elementary principals (M=3.24, SD=1.15) and high school principals (M=2.50, SD=1.00) for *Need to relocate*; t(43) = 1.98, p = .054. These results suggest that female principals working in elementary schools considered *Need to relocate* as more formidable, as compared to high school principals.

Table 33

Independent Samples t Test: Group Statistics for Building Type

Perceived Barrier		N	Mean	Std. Deviation	Std. Error Mean
The perception that the superintendent needs to possess a specific leadership style.	1.00 Elem and Mid	33	3.2727	1.30558	.22727
	2.00 High	12	3.3333	1.30268	.37605
A focus towards fiscal management and away from student learning.	1.00 Elem and Mid	33	3.4242	1.27550	.22204
	2.00 High	12	3.2500	.96531	.27866
Lack of female role models for women in administrative positions.	1.00 Elem and Mid	33	2.7879	1.24392	.21654
	2.00 High	12	2.6667	1.15470	.33333
You need to be a member of the "old boys' club" to become a superintendent.	1.00 Elem and Mid	33	3.0909	1.54846	.26955
	2.00 High	12	3.1667	1.40346	.40514
Uncertain future of funding for public schools.	1.00 Elem and Mid	33	3.0606	1.05887	.18433
	2.00 High	12	3.0833	1.24011	.35799
Lack of preparation programs offered by colleges or professional organizations for ASPIRING female superintendents.	1.00 Elem and Mid	33	2.6667	1.13652	.19784
	2.00 High	12	2.2500	.96531	.27866
Female superintendents are not well accepted by community and school board.	1.00 Elem and Mid	33	2.8182	1.23629	.21521
	2.00 High	12	2.6667	1.30268	.37605
Accountability pressures.	1.00 Elem and Mid	33	3.1818	1.07397	.18695
	2.00 High	12	3.2500	1.05529	.30464
Lack of networks and mentorships for female administrators.	1.00 Elem and Mid	33	2.9394	1.29758	.22588
	2.00 High	12	2.8333	1.02986	.29729

Perceived Barrier		N	Mean	Std. Deviation	Std. Error Mean
Male faculty have difficulty working with female supervisors.	1.00 Elem and Mid	33	2.3939	1.14399	.19914
	2.00 High	12	2.1667	.83485	.24100
Local politics (public, press, community, labor, and school board relations).	1.00 Elem and Mid	33	3.6970	1.10354	.19210
	2.00 High	12	3.5000	1.38170	.39886
Lack of pro-family policies or support services (e.g., childcare, telecommuting, flexible work schedules).	1.00 Elem and Mid	33	3.1515	1.25303	.21812
	2.00 High	12	3.0833	1.50504	.43447
The perception that the superintendent needs to be an authoritarian rather than a participatory leader.	1.00 Elem and Mid	33	2.6364	1.19421	.20789
	2.00 High	12	2.5000	1.16775	.33710
Inadequate compensation for level of responsibility and time commitment.	1.00 Elem and Mid	33	3.4242	1.27550	.22204
	2.00 High	12	3.5833	1.31137	.37856
Professional organizations are not helpful in recruitment and placement of females in the superintendency.	1.00 Elem and Mid	33	2.7879	.96039	.16718
	2.00 High	12	3.0000	1.27920	.36927
Female administrators need to work harder than male administrators to "show" or "prove" they are competent.	1.00 Elem and Mid	33	3.2424	1.37000	.23849
	2.00 High	12	3.2500	1.42223	.41056
Need to relocate.	1.00 Elem and Mid	33	3.2424	1.14647	.19957
	2.00 High	12	2.5000	1.00000	.28868
No direct administrative pathway from elementary administration to superintendency.	1.00 Elem and Mid	33	3.0303	1.01504	.17670
	2.00 High	12	2.6667	.77850	.22473
I would prefer to be recruited or offered my next administrative position rather than apply or let my intentions be known.	1.00 Elem and Mid	33	2.6970	1.18545	.20636
	2.00 High	12	2.9167	1.24011	.35799
Family concerns, restrictions, obligations.	1.00 Elem and Mid	33	3.7576	1.22552	.21334
	2.00 High	12	3.7500	1.21543	.35086
Female promotions tend to be horizontal reassignments (i.e., new title but same authority).	1.00 Elem and Mid	33	3.0303	1.13150	.19697
	2.00 High	11	2.8182	.87386	.26348

Table 34

Building Type: Independent Samples t Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
The perception that the superintendent needs to possess a specific leadership style.	Equal variances assumed	.031	.860	-.138	43	.891	-.06061	.43986	-.94767	.82646
	Equal variances not assumed			-.138	19.604	.892	-.06061	.43939	-.97835	.85714
A focus towards fiscal management and away from student learning.	Equal variances assumed	1.565	.218	.429	43	.670	.17424	.40579	-.64412	.99260
	Equal variances not assumed			.489	25.823	.629	.17424	.35630	-.55839	.90688
Lack of female role models for women in administrative positions.	Equal variances assumed	.159	.692	.294	43	.770	.12121	.41184	-.70935	.95177
	Equal variances not assumed			.305	20.960	.763	.12121	.39749	-.70552	.94794
You need to be a member of the "old boys' club" to become a superintendent.	Equal variances assumed	1.726	.196	-.149	43	.883	-.07576	.50993	-1.10412	.95261
	Equal variances not assumed			-.156	21.449	.878	-.07576	.48662	-1.08645	.93494
Uncertain future of funding for public schools.	Equal variances assumed	.160	.691	-.061	43	.952	-.02273	.37353	-.77602	.73056
	Equal variances not assumed			-.056	17.190	.956	-.02273	.40266	-.87154	.82609
Lack of preparation programs offered by colleges or professional organizations for ASPIRING female superintendents.	Equal variances assumed	1.083	.304	1.129	43	.265	.41667	.36921	-.32793	1.16126
	Equal variances not assumed			1.219	22.885	.235	.41667	.34175	-.29049	1.12383

Female superintendents are not well accepted by community and school board.	Equal variances assumed	.008	.928	.359	43	.722	.15152	.42259	-.70072	1.00375
	Equal variances not assumed			.350	18.696	.730	.15152	.43328	-.75634	1.05938
Accountability pressures.	Equal variances assumed	.083	.775	-.189	43	.851	-.06818	.36043	-.79507	.65870
	Equal variances not assumed			-.191	19.877	.851	-.06818	.35743	-.81406	.67770
Lack of networks and mentorships for female administrators.	Equal variances assumed	2.535	.119	.255	43	.800	.10606	.41619	-.73327	.94540
	Equal variances not assumed			.284	24.553	.779	.10606	.37337	-.66362	.87574
Male faculty have difficulty working with female supervisors.	Equal variances assumed	2.285	.138	.628	43	.533	.22727	.36185	-.50246	.95701
	Equal variances not assumed			.727	26.848	.474	.22727	.31263	-.41437	.86891
Local politics (public, press, community, labor, and school board relations).	Equal variances assumed	.954	.334	.495	43	.623	.19697	.39810	-.60587	.99981
	Equal variances not assumed			.445	16.392	.662	.19697	.44271	-.73972	1.13366
Lack of pro-family policies or support services (e.g., childcare, telecommuting, flexible work schedules).	Equal variances assumed	.759	.388	.153	43	.879	.06818	.44567	-.83060	.96696
	Equal variances not assumed			.140	16.875	.890	.06818	.48615	-.95808	1.09444
The perception that the superintendent needs to be an authoritarian rather than a participatory leader.	Equal variances assumed	.355	.555	.341	43	.735	.13636	.40030	-.67093	.94366
	Equal variances not assumed			.344	19.965	.734	.13636	.39605	-.68987	.96259
Inadequate compensation for level of responsibility and time commitment.	Equal variances assumed	.020	.887	-.367	43	.715	-.15909	.43310	-1.03251	.71433
	Equal variances not assumed			-.363	19.093	.721	-.15909	.43887	-1.07735	.75917
Professional organizations are not helpful in recruitment and placement of females in the superintendency.	Equal variances assumed	1.452	.235	-.599	43	.553	-.21212	.35436	-.92675	.50251
	Equal variances not assumed			-.523	15.744	.608	-.21212	.40536	-1.07257	.64833

Female administrators need to work harder than male administrators to "show" or "prove" they are competent.	Equal variances assumed	.187	.668	-.016	43	.987	-.00758	.46639	-.94815	.93300
	Equal variances not assumed			-.016	18.935	.987	-.00758	.47480	-1.00158	.98643
Need to relocate.	Equal variances assumed	.315	**.578**	1.983	43	**.054***	.74242	.37446	-.01276	1.49760
	Equal variances not assumed			2.115	22.279	.046	.74242	.35095	.01513	1.46972
No direct administrative pathway from elementary administration to superintendency.	Equal variances assumed	1.356	.251	1.124	43	.267	.36364	.32365	-.28906	1.01633
	Equal variances not assumed			1.272	25.459	.215	.36364	.28588	-.22460	.95188
I would prefer to be recruited or offered my next administrative position rather than apply or let my intentions be known.	Equal variances assumed	.188	.667	-.543	43	.590	-.21970	.40441	-1.03527	.59587
	Equal variances not assumed			-.532	18.811	.601	-.21970	.41321	-1.08514	.64575
Family concerns, restrictions, obligations.	Equal variances assumed	.107	.745	.018	43	.985	.00758	.41225	-.82382	.83897
	Equal variances not assumed			.018	19.711	.985	.00758	.41063	-.84979	.86494
Female promotions tend to be horizontal reassignments (i.e., new title but same authority).	Equal variances assumed	2.372	.131	.566	42	.574	.21212	.37454	-.54372	.96797
	Equal variances not assumed			.645	22.140	.526	.21212	.32897	-.46986	.89411

Living with school-aged children. An independent samples *t* test was conducted to compare perceived barriers to the superintendency for principals living with school-aged children to those not living with school-aged children, Table 16. While it was anticipated that those with children would be more likely to cite intrapersonal barriers such as *Family concerns, restrictions and obligations*, than those with no children, that was not supported as evident in Table 35 and Table 36.

The equal variance assumption has been satisfied. There was a significant difference in the scores for principals without children (M=3.41, SD=0.94) and principals with children (M=2.84, SD=1.08) for the intrapersonal barrier, *Uncertain future of funding for public schools*; t(47) = 1.83, p = .074. These results suggest that female principals without children considered *Uncertain future of funding for public schools* as more formidable than principals with children, when deciding whether or not to seek the superintendency.

The equal variance assumption has not been satisfied in this case. Therefore, the statistical significance of these result may be attributed to type I error and as such p = .018, equal variances not assumed, was considered. There was a significant difference in the scores for principals without children (M=3.12, SD=1.27) and principals with children (M=2.25, SD=0.84) for *Lack of preparation programs*; t(47) = 2.87, p = .018. These results suggest that female principals without children considered *Lack of preparation programs* as more formidable than principals with children, when deciding whether or not to seek the superintendency.

Table 35

Independent Samples t Test: Group Statistics for Family Status

Perceived Barrier		N	Mean	Std. Deviation	Std. Error Mean
The perception that the superintendent needs to possess a specific leadership style.	1.00 without children	17	3.1176	1.40900	.34173
	2.00 with children	32	3.4063	1.24069	.21933
A focus towards fiscal management and away from student learning.	1.00 without children	17	3.4706	1.41940	.34426
	2.00 with children	32	3.4063	1.07341	.18975
Lack of female role models for women in administrative positions.	1.00 without children	17	2.7647	1.14725	.27825
	2.00 with children	32	2.8125	1.22967	.21738
You need to be a member of the "old boys' club" to become a superintendent.	1.00 without children	17	3.1176	1.69124	.41019
	2.00 with children	32	3.2188	1.40814	.24893

Perceived Barrier		N	Mean	Std. Deviation	Std. Error Mean
Uncertain future of funding for public schools.	1.00 without children	17	3.4118	.93934	.22782
	2.00 with children	32	2.8438	1.08090	.19108
Lack of preparation programs offered by colleges or professional organizations for ASPIRING female superintendents.	1.00 without children	17	3.1176	1.26897	.30777
	2.00 with children	32	2.2500	.84242	.14892
Female superintendents are not well accepted by community and school board.	1.00 without children	17	2.8824	1.40900	.34173
	2.00 with children	32	2.8438	1.16700	.20630
Accountability pressures.	1.00 without children	16	3.3750	1.20416	.30104
	2.00 with children	32	3.0938	.96250	.17015
Lack of networks and mentorships for female administrators.	1.00 without children	17	2.8824	1.36393	.33080
	2.00 with children	32	2.9063	1.11758	.19756
Male faculty have difficulty working with female supervisors.	1.00 without children	17	2.3529	.93148	.22592
	2.00 with children	32	2.3438	1.09572	.19370
Local politics (public, press, community, labor, and school board relations).	1.00 without children	17	4.0000	1.22474	.29704
	2.00 with children	32	3.5313	1.07716	.19042
Lack of pro-family policies or support services (e.g., childcare, telecommuting, flexible work schedules).	1.00 without children	17	2.9412	1.29762	.31472
	2.00 with children	32	3.3125	1.33047	.23520
The perception that the superintendent needs to be an authoritarian rather than a participatory leader.	1.00 without children	17	2.6471	1.36662	.33145
	2.00 with children	32	2.7188	1.14256	.20198
Inadequate compensation for level of responsibility and time commitment.	1.00 without children	17	3.7647	1.30045	.31541
	2.00 with children	32	3.4063	1.21441	.21468
Professional organizations are not helpful in recruitment and placement of females in the superintendency.	1.00 without children	17	2.7059	.91956	.22303
	2.00 with children	32	2.9688	1.14960	.20322
Female administrators need to work harder than male administrators to “show” or “prove” they are competent.	1.00 without children	17	3.4118	1.50245	.36440
	2.00 with children	32	3.2813	1.27594	.22556
Need to relocate.	1.00 without children	17	3.0000	1.22474	.29704
	2.00 with children	32	3.0938	1.08834	.19239
No direct administrative pathway from elementary administration to superintendency.	1.00 without children	17	3.1176	.92752	.22496
	2.00 with children	32	2.8438	.95409	.16866
I would prefer to be recruited or offered my next administrative position rather than apply or let my intentions be known.	1.00 without children	17	2.9412	1.24853	.30281
	2.00 with children	32	2.6875	1.11984	.19796
Family concerns, restrictions, obligations.	1.00 without children	17	3.5882	1.12132	.27196
	2.00 with children	32	3.8750	1.23784	.21882

Perceived Barrier		N	Mean	Std. Deviation	Std. Error Mean
Female promotions tend to be horizontal reassignments (i.e., new title but same authority).	1.00 without children	17	3.0000	1.22474	.29704
	2.00 with children	31	3.1290	1.02443	.18399

Table 36

Family Status: Independent Samples t Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
Perceived Barrier		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
The perception that the superintendent needs to possess a specific leadership style.	Equal variances assumed	.569	.454	-.739	47	.463	-.28860	.39029	-1.07377	.49656
	Equal variances not assumed			-.711	29.328	.483	-.28860	.40606	-1.11869	.54148
A focus towards fiscal management and away from student learning.	Equal variances assumed	1.712	.197	.178	47	.859	.06434	.36088	-.66165	.79033
	Equal variances not assumed			.164	25.962	.871	.06434	.39309	-.74372	.87240
Lack of female role models for women in administrative positions.	Equal variances assumed	.824	.369	-.132	47	.895	-.04779	.36082	-.77367	.67809
	Equal variances not assumed			-.135	34.800	.893	-.04779	.35309	-.76476	.66917
You need to be a member of the "old boys' club" to become a superintendent.	Equal variances assumed	2.402	.128	-.223	47	.824	-.10110	.45333	-1.01309	.81088
	Equal variances not assumed			-.211	27.995	.835	-.10110	.47981	-1.08396	.88175
Uncertain future of funding for public schools.	Equal variances assumed	.552	**.461**	1.829	47	**.074***	.56801	.31059	-.05682	1.19285
	Equal variances not assumed			1.910	36.982	.064	.56801	.29734	-.03447	1.17050

Lack of preparation programs offered by colleges or professional organizations for ASPIRING female superintendents.	Equal variances assumed	6.599	**.013**	2.868	47	.006	.86765	.30255	.25899	1.47631
	Equal variances not assumed			2.538	23.699	**.018***	.86765	.34191	.16151	1.57378
Female superintendents are not well accepted by community and school board.	Equal variances assumed	2.954	.092	.103	47	.919	.03860	.37655	-.71891	.79611
	Equal variances not assumed			.097	27.876	.924	.03860	.39918	-.77924	.85644
Accountability pressures.	Equal variances assumed	2.034	.161	.877	46	.385	.28125	.32071	-.36431	.92681
	Equal variances not assumed			.813	24.885	.424	.28125	.34580	-.43110	.99360
Lack of networks and mentorships for female administrators.	Equal variances assumed	1.593	.213	-.066	47	.948	-.02390	.36228	-.75271	.70491
	Equal variances not assumed			-.062	27.635	.951	-.02390	.38531	-.81363	.76584
Male faculty have difficulty working with female supervisors.	Equal variances assumed	.358	.552	.029	47	.977	.00919	.31294	-.62037	.63875
	Equal variances not assumed			.031	37.665	.976	.00919	.29759	-.59341	.61180
Local politics (public, press, community, labor, and school board relations).	Equal variances assumed	.481	.491	1.383	47	.173	.46875	.33901	-.21325	1.15075
	Equal variances not assumed			1.329	29.298	.194	.46875	.35284	-.25256	1.19006
Lack of pro-family policies or support services (e.g., childcare, telecommuting, flexible work schedules).	Equal variances assumed	.623	.434	-.938	47	.353	-.37132	.39598	-1.16793	.42528
	Equal variances not assumed			-.945	33.473	.351	-.37132	.39289	-1.17024	.42760
The perception that the superintendent needs to be an authoritarian rather than a participatory leader.	Equal variances assumed	1.578	.215	-.195	47	.846	-.07169	.36719	-.81037	.66699
	Equal variances not assumed			-.185	28.090	.855	-.07169	.38815	-.86666	.72327

Inadequate compensation for level of responsibility and time commitment.	Equal variances assumed	.010	.920	.960	47	.342	.35846	.37346	-.39286	1.10977
	Equal variances not assumed			.940	30.842	.355	.35846	.38153	-.41985	1.13676
Professional organizations are not helpful in recruitment and placement of females in the superintendency.	Equal variances assumed	.913	.344	-.813	47	.420	-.26287	.32318	-.91302	.38728
	Equal variances not assumed			-.871	39.533	.389	-.26287	.30173	-.87291	.34717
Female administrators need to work harder than male administrators to "show" or "prove" they are competent.	Equal variances assumed	1.575	.216	.320	47	.750	.13051	.40736	-.68898	.95001
	Equal variances not assumed			.305	28.454	.763	.13051	.42856	-.74671	1.00774
Need to relocate.	Equal variances assumed	.334	.566	-.275	47	.785	-.09375	.34112	-.78000	.59250
	Equal variances not assumed			-.265	29.555	.793	-.09375	.35391	-.81698	.62948
No direct administrative pathway from elementary administration to superintendency.	Equal variances assumed	.035	.853	.966	47	.339	.27390	.28365	-.29674	.84454
	Equal variances not assumed			.974	33.569	.337	.27390	.28116	-.29776	.84556
I would prefer to be recruited or offered my next administrative position rather than apply or let my intentions be known.	Equal variances assumed	.055	.815	.725	47	.472	.25368	.34972	-.44986	.95721
	Equal variances not assumed			.701	29.790	.489	.25368	.36178	-.48539	.99275
Family concerns, restrictions, obligations.	Equal variances assumed	.053	.818	-.797	47	.430	-.28676	.35998	-1.01095	.43742
	Equal variances not assumed			-.822	35.700	.417	-.28676	.34906	-.99490	.42137
Female promotions tend to be horizontal reassignments (i.e., new title but same authority).	Equal variances assumed	2.008	.163	-.389	46	.699	-.12903	.33145	-.79621	.53814
	Equal variances not assumed			-.369	28.403	.715	-.12903	.34941	-.84431	.58625

Research Question 4

Do the perceived barriers or taxonomy of barriers differ among those female principals that have applied or intend to apply for the superintendency in the future and those that do not?

This research question was used to determine if females who plan to apply to the superintendency in the future tend to differ in regard to the perceptions they have regarding the barriers they will face. The null hypothesis for this research questions is that no differences would exist in perceived barriers between those principals that intend to apply to the superintendency and those that do not. However, differences in the barrier taxonomy would be expected. Because intrapersonal barriers are particularly prominent as barriers in recent studies, Derrington and Sharratt (2009), female principals that intend to apply for the superintendency would be expected to have fewer associated with this taxonomy. Table 37 and Table 38 display the results of the independent samples *t* test at 10% alpha level ($p < .10$) for the two groups, those that intend to pursue the superintendency in the future and those respondents that do not intend to pursue the superintendency in the future.

The equal variance assumption has been satisfied. There was a significant difference in the scores for principals that intend to apply to the superintendency in the future (M=3.20, SD=1.28) and principals that do not intend to apply (M=2.60, SD=1.16) for the sociocultural barrier, *Female superintendents are not well accepted by community and school board*; $t(48) = 1.71$, $p = .093$. These results suggest that female principals that intend to apply to the superintendency in the future considered *Female superintendents*

are not well accepted by community and school board, as more formidable, as compared to principals that do not intend to apply

The equal variance assumption has been satisfied. There was a significant difference in the scores for principals intend to apply to the superintendency in the future (M=3.25, SD=1.29) and principals that do not intend to apply (M=2.63, SD=1.07) for the structural barrier, *Lack of networks and mentorships for female administrators*; t(48) = 1.84, p = .072. These results suggest that female principals intend to apply to the superintendency in the future considered *Lack of networks and mentorships for female administrators* as more formidable than their counterparts that do not intend to apply to the superintendency

The equal variance assumption has been satisfied. There was a significant difference in the scores for principals intend to apply to the superintendency in the future (M=3.20, SD=1.15) and principals that do not intend to apply (M=2.40, SD=1.16) for the sociocultural barrier, *The perception that the superintendent needs to be an authoritarian rather than a participatory leader*; t(48) = 2.39, p = .021. These results suggest that female principals intend to apply to the superintendency in the future considered *The perception that the superintendent needs to be an authoritarian rather than a participatory leader* as more formidable than principals that do not intend to apply when deciding whether or not to seek the superintendency

The equal variance assumption has been satisfied. There was a significant difference in the scores for principals intend to apply to the superintendency in the future (M=4.00, SD=1.08) and principals that do not intend to apply (M=2.90, SD=1.32) for the sociocultural barrier, *Female administrators need to work harder than male*

administrators to "show" or "prove" they are competent; t(48) = 3.10, p = .003. These results suggest that female principals intend to apply to the superintendency in the future considered *Female administrators need to work harder than male administrators to "show" or "prove" they are competent* as more formidable, as compared to principals that do not intend to apply.

The equal variance assumption has not been satisfied in this case. Therefore, the statistical significance of these result may be attributed to type I error and as such p = .065, equal variances not assumed, was considered. There was a significant difference in the scores for principals intend to apply to the superintendency in the future (M=3.15, SD=0.93) and principals that do not intend to apply (M=2.57, SD=1.25) for the sociocultural barrier, *I would prefer to be recruited or offered my next administrative position rather than let my intentions be known*; t(48) = 1.78, p = .065. These results suggest that female principals intend to apply to the superintendency in the future considered *I would prefer to be recruited or offered my next administrative position rather than let my intentions be known* as more formidable, than their counterparts that do not intend to apply to the superintendency.

The equal variance assumption has been satisfied. There was a significant difference in the scores for principals intend to apply to the superintendency in the future (M=3.45, SD=0.89) and principals that do not intend to apply (M=2.82, SD=1.14) for the structural barrier, *Female promotions tend to be horizontal reassignments (i.e., new title but same authority)*; t(47) = 2.05, p = .046. These results suggest that female principals intend to apply to the superintendency in the future considered *Female promotions tend to be horizontal reassignments (i.e.,, new title but same authority)* as more formidable

than principals that do not intend to apply, when deciding whether or not to seek the superintendency

Table 37

Independent Samples t Test: Group Statistics for Intent to Pursue Superintendency

Perceived		N	Mean	Std. Deviation	Std. Error Mean
The perception that the superintendent needs to possess a specific leadership style.	1.00 Yes	20	3.5500	1.14593	.25624
	2.00 No	30	3.1333	1.35782	.24790
A focus towards fiscal management and away from student learning.	1.00 Yes	20	3.3000	1.08094	.24170
	2.00 No	30	3.5333	1.25212	.22861
Lack of female role models for women in administrative positions.	1.00 Yes	20	3.0500	1.39454	.31183
	2.00 No	30	2.6000	1.00344	.18320
You need to be a member of the "old boys' club" to become a superintendent.	1.00 Yes	20	3.4500	1.46808	.32827
	2.00 No	30	3.0000	1.48556	.27123
Uncertain future of funding for public schools.	1.00 Yes	20	3.3000	1.03110	.23056
	2.00 No	30	2.9000	1.06188	.19387
Lack of preparation programs offered by colleges or professional organizations for ASPIRING female superintendents.	1.00 Yes	20	2.5000	1.05131	.23508
	2.00 No	30	2.5667	1.10433	.20162
Female superintendents are not well accepted by community and school board.	1.00 Yes	20	3.2000	1.28145	.28654
	2.00 No	30	2.6000	1.16264	.21227
Accountability pressures.	1.00 Yes	20	3.1000	.96791	.21643
	2.00 No	29	3.2069	1.11417	.20690
Lack of networks and mentorships for female administrators.	1.00 Yes	20	3.2500	1.29269	.28905
	2.00 No	30	2.6333	1.06620	.19466
Male faculty have difficulty working with female supervisors.	1.00 Yes	20	2.6000	1.04630	.23396
	2.00 No	30	2.1667	.98553	.17993
Local politics (public, press, community, labor, and school board relations).	1.00 Yes	20	3.7500	1.16416	.26031
	2.00 No	30	3.6000	1.16264	.21227
Lack of pro-family policies or support services (e.g., childcare, telecommuting, flexible work schedules).	1.00 Yes	20	3.0000	1.16980	.26157
	2.00 No	30	3.3667	1.42595	.26034
The perception that the superintendent needs to be an authoritarian rather than a participatory leader.	1.00 Yes	20	3.2000	1.15166	.25752
	2.00 No	30	2.4000	1.16264	.21227
Inadequate compensation for level of responsibility and time commitment.	1.00 Yes	20	3.5500	1.27630	.28539
	2.00 No	30	3.4667	1.25212	.22861
Professional organizations are not helpful in recruitment and placement of females in the superintendency.	1.00 Yes	20	2.9000	.85224	.19057
	2.00 No	30	2.8667	1.19578	.21832

Perceived Barrier		N	Mean	Std. Deviation	Std. Error Mean
Female administrators need to work harder than male administrators to "show" or "prove" they are competent.	1.00 Yes	20	4.0000	1.07606	.24061
	2.00 No	30	2.9000	1.32222	.24140
Need to relocate.	1.00 Yes	20	3.1000	1.07115	.23952
	2.00 No	30	3.0667	1.17248	.21406
No direct administrative pathway from elementary administration to superintendency.	1.00 Yes	20	3.0000	.91766	.20520
	2.00 No	30	2.9333	.98027	.17897
I would prefer to be recruited or offered my next administrative position rather than apply or let my intentions be known.	1.00 Yes	20	3.1500	.93330	.20869
	2.00 No	30	2.5667	1.25075	.22835
Family concerns, restrictions, obligations.	1.00 Yes	20	3.8000	1.15166	.25752
	2.00 No	30	3.8000	1.24291	.22692
Female promotions tend to be horizontal reassignments (i.e., new title but same authority).	1.00 Yes	20	3.4500	.88704	.19835
	2.00 No	29	2.8276	1.13606	.21096

Table 38

Intent to Pursue Superintendency: Independent Samples t Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
The perception that the superintendent needs to possess a specific leadership style.	Equal variances assumed	1.716	.196	1.129	48	.264	.41667	.36897	-.32520	1.15853
	Equal variances not assumed			1.169	45.244	.249	.41667	.35653	-.30132	1.13465
A focus towards fiscal management and away from student learning.	Equal variances assumed	.466	.498	-.681	48	.499	-.23333	.34275	-.92248	.45581
	Equal variances not assumed			-.701	44.740	.487	-.23333	.33269	-.90351	.43684
Lack of female role models for women in administrative positions.	Equal variances assumed	7.258	.010	1.328	48	.190	.45000	.33889	-.23138	1.13138
	Equal variances not assumed			1.244	31.891	.222	.45000	.36166	-.28678	1.18678

You need to be a member of the "old boys' club" to become a superintendent.	Equal variances assumed	.156	.695	1.054	48	.297	.45000	.42685	-.40825	1.30825
	Equal variances not assumed			1.057	41.212	.297	.45000	.42582	-.40984	1.30984
Uncertain future of funding for public schools.	Equal variances assumed	.031	.862	1.320	48	.193	.40000	.30305	-.20933	1.00933
	Equal variances not assumed			1.328	41.707	.191	.40000	.30124	-.20805	1.00805
Lack of preparation programs offered by colleges or professional organizations for ASPIRING female superintendents.	Equal variances assumed	.117	.734	-.213	48	.832	-.06667	.31282	-.69564	.56231
	Equal variances not assumed			-.215	42.254	.831	-.06667	.30970	-.69156	.55822
Female superintendents are not well accepted by community and school board.	Equal variances assumed	.835	**.365**	1.716	48	**.093***	.60000	.34960	-.10292	1.30292
	Equal variances not assumed			1.683	38.065	.101	.60000	.35660	-.12186	1.32186
Accountability pressures.	Equal variances assumed	1.226	.274	-.348	47	.730	-.10690	.30737	-.72524	.51145
	Equal variances not assumed			-.357	44.421	.723	-.10690	.29941	-.71016	.49637
Lack of networks and mentorships for female administrators.	Equal variances assumed	2.138	**.150**	1.840	48	**.072***	.61667	.33519	-.05729	1.29062
	Equal variances not assumed			1.770	35.375	.085	.61667	.34849	-.09054	1.32387
Male faculty have difficulty working with female supervisors.	Equal variances assumed	1.033	.315	1.486	48	.144	.43333	.29157	-.15290	1.01957
	Equal variances not assumed			1.468	39.150	.150	.43333	.29515	-.16359	1.03025
Local politics (public, press, community, labor, and school board relations).	Equal variances assumed	.008	.931	.447	48	.657	.15000	.33580	-.52517	.82517
	Equal variances not assumed			.447	40.838	.658	.15000	.33589	-.52842	.82842

Lack of pro-family policies or support services (e.g., childcare, telecommuting, flexible work schedules).	Equal variances assumed	2.186	.146	-.955	48	.345	-.36667	.38407	-1.13890	.40556
	Equal variances not assumed			-.994	45.825	.326	-.36667	.36905	-1.10960	.37627
The perception that the superintendent needs to be an authoritarian rather than a participatory leader.	Equal variances assumed	.140	.710	2.393	48	**.021***	.80000	.33437	.12770	1.47230
	Equal variances not assumed			2.397	41.145	.021	.80000	.33373	.12610	1.47390
Inadequate compensation for level of responsibility and time commitment.	Equal variances assumed	.057	.812	.229	48	.820	.08333	.36424	-.64901	.81568
	Equal variances not assumed			.228	40.327	.821	.08333	.36566	-.65551	.82217
Professional organizations are not helpful in recruitment and placement of females in the superintendency.	Equal variances assumed	3.036	.088	.108	48	.915	.03333	.30976	-.58947	.65614
	Equal variances not assumed			.115	47.733	.909	.03333	.28979	-.54941	.61608
Female administrators need to work harder than male administrators to "show" or "prove" they are competent.	Equal variances assumed	2.490	**.121**	3.096	48	**.003***	1.10000	.35527	.38569	1.81431
	Equal variances not assumed			3.227	45.979	.002	1.10000	.34084	.41392	1.78608
Need to relocate.	Equal variances assumed	.083	.775	.102	48	.919	.03333	.32720	-.62455	.69121
	Equal variances not assumed			.104	43.353	.918	.03333	.32124	-.61435	.68101
No direct administrative pathway from elementary administration to superintendency.	Equal variances assumed	.105	.747	.242	48	.810	.06667	.27597	-.48820	.62153
	Equal variances not assumed			.245	42.710	.808	.06667	.27228	-.48254	.61588
I would prefer to be recruited or offered my next administrative position rather than apply or let my intentions be known.	Equal variances assumed	4.646	**.036**	1.779	48	.082	.58333	.32786	-.07588	1.24255
	Equal variances not assumed			1.886	47.305	**.065***	.58333	.30935	-.03890	1.20556

Family concerns, restrictions, obligations.	Equal variances assumed	.137	.713	0.000	48	1.000	0.00000	.34861	-.70092	.70092
	Equal variances not assumed			0.000	42.983	1.000	0.00000	.34323	-.69221	.69221
Female promotions tend to be horizontal reassignments (i.e., new title but same authority).	Equal variances assumed	1.603	**.212**	2.054	47	**.046***	.62241	.30304	.01278	1.23204
	Equal variances not assumed			2.149	46.191	.037	.62241	.28956	.03962	1.20521

Research Question 5

Are there differences in the rate with which female principals seek or intend to seek the superintendency associated with their age, family status, years of experience, school type, school size, district size, community type?

To determine the most likely demographic characteristics of female principals that intend to apply for a superintendent position in the future, cross tabulations were compiled from respondent data. Additionally, chi-squared tests were used to determine relatedness between specific demographic characteristics and intent to apply to the superintendency, Tables 39 - 52. Table 39 - Table 42 display the chi-squared test at 10% alpha level ($p < .10$) for the possible dependence between intent to pursue the superintendency in the future and each demographic. Results indicate that there is a relation between age and intent to apply, X^2 (2, N=50) = 6.74, $p < .10$. Younger principals appear more likely to apply for the superintendency than were older principals.

Additionally, the relation between years of experience and intent to apply for the superintendency was significant X^2 (2, N=50) = 4.92, $p < .10$. Newly hired female principals (0-5 years of experience) were more likely to pursue the superintendency in the future than their more experienced female counterparts. Table 39 also displays the

relationship between a principal's intent to apply to the superintendency and years of experience as a building administrator.

Table 39

Cross Tabulation: Group Statistics Years as Building Principal

Crosstab

			Years as building principal			
			1.00 0-5	2.00 6-10	3.00 11+	Total
Does R intend to seek the Superintendency	No	Count	7	10	13	30
		% within Years as building principal	43.8%	55.6%	81.3%	60.0%
	Yes	Count	9	8	3	20
		% within Years as building principal	56.3%	44.4%	18.8%	40.0%
Total		Count	16	18	16	50
		% within Years as building principal	100.0%	100.0%	100.0%	100.0%

Table 40

Years as Building Principal: Chi-Squared Test

Chi-Squared Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Squared	4.919[a]	2	.085
Likelihood Ratio	5.198	2	.074
Linear-by-Linear Association	4.594	1	.032
N of Valid Cases	50		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.40.

Table 41

Cross Tabulation: Group Statistics Principal's Age

Crosstab

			Age of principal			
			2.00 41-50	3.00 51+	4.00	Total
Does R intend to seek the Superintendency	No	Count	4	18	8	30
		% within Age of principal	33.3%	62.1%	88.9%	60.0%
	Yes	Count	8	11	1	20
		% within Age of principal	66.7%	37.9%	11.1%	40.0%
Total		Count	12	29	9	50
		% within Age of principal	100.0%	100.0%	100.0%	100.0%

Table 42

Principal's Age: Chi-Squared Test

Chi-Squared Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Squared	6.737[a]	2	.034
Likelihood Ratio	7.250	2	.027
Linear-by-Linear Association	6.598	1	.010
N of Valid Cases	50		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 3.60.

Table 43

Cross Tabulation: Group Statistics Community Type

Crosstab

			In what type of community is your building located?			
			1.00 Urban	2.00 Suburban	3.00 Rural	Total
Does R intend to seek the Superintendency	No	Count	6	15	8	29
		% within In what type of community is your building located?	60.0%	62.5%	53.3%	59.2%
	Yes	Count	4	9	7	20
		% within In what type of community is your building located?	40.0%	37.5%	46.7%	40.8%
Total		Count	10	24	15	49
		% within In what type of community is your building located?	100.0%	100.0%	100.0%	100.0%

Table 44

Community Type: Chi-Squared Test

Chi-Squared Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Squared	.325[a]	2	.850
Likelihood Ratio	.323	2	.851
Linear-by-Linear Association	.152	1	.696
N of Valid Cases	49		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 4.08.

Table 45

Cross Tabulation: Group Statistics for District Enrollment

Crosstab

			What is the student enrollment in your DISTRICT, January 2016?				
			1.00 0-1500	2.00 1,501-3,000	3.00 3,001-5,000	4.00 More than 5,000	Total
Does R intend to seek the Superintendency	No	Count	6	11	7	5	29
		% within Student enrollment in your DISTRICT.	50.0%	78.6%	53.8%	55.6%	60.4%
	Yes	Count	6	3	6	4	19
		% within Student enrollment in your DISTRICT.	50.0%	21.4%	46.2%	44.4%	39.6%
Total		Count	12	14	13	9	48
		% within Student enrollment in your DISTRICT.	100.0%	100.0%	100.0%	100.0%	100.0%

Table 46

District Enrollment: Chi-Squared Test

Chi-Squared Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Squared	2.798[a]	3	.424
Likelihood Ratio	2.950	3	.399
Linear-by-Linear Association	.018	1	.895
N of Valid Cases	48		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 3.56.

Table 47

Cross Tabulation: Group Statistics for Family Status

Crosstab

			School aged children		
			1.00 without children	2.00 with children	Total
Does R intend to seek the Superintendency	No	Count	11	19	30
		% within school aged children	64.7%	59.4%	61.2%
	Yes	Count	6	13	19
		% within school aged children	35.3%	40.6%	38.8%
Total		Count	17	32	49
		% within school aged children	100.0%	100.0%	100.0%

Table 48

Family Status: Chi-Squared Test

Chi-Squared Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Squared	.133[a]	1	.715		
Continuity Correction[b]	.003	1	.955		
Likelihood Ratio	.134	1	.715		
Fisher's Exact Test				.767	.480
Linear-by-Linear Association	.130	1	.718		
N of Valid Cases	49				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.59.
b. Computed only for a 2x2 table

Table 49

Cross Tabulation: Group Statistics for Building Enrollment

Crosstab

			Students in the Building			
			1.00 1-299	2.00 300-599	3.00 600+	Total
Does R intend to seek the Superintendency	No	Count	6	21	3	30
		% within Students in the Building	60.0%	67.7%	33.3%	60.0%
	Yes	Count	4	10	6	20
		% within Students in the Building	40.0%	32.3%	66.7%	40.0%
Total		Count	10	31	9	50
		% within Students in the Building	100.0%	100.0%	100.0%	100.0%

Table 50

Building Enrollment: Chi-Squared Test

Chi-Squared Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Squared	3.441[a]	2	.179
Likelihood Ratio	3.398	2	.183
Linear-by-Linear Association	1.239	1	.266
N of Valid Cases	50		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 3.60.

Table 51

Cross Tabulation: Group Statistics for Building Type

Crosstab

			Type of building supervised		
			1.00 Elem and Mid	2.00 High	Total
Does R intend to seek the Superintendency	No	Count	21	6	27
		% within Type of building supervised	63.6%	50.0%	60.0%
	Yes	Count	12	6	18
		% within Type of building supervised	36.4%	50.0%	40.0%
Total		Count	33	12	45
		% within Type of building supervised	100.0%	100.0%	100.0%

Table 52

Building Type: Chi-Squared Test

Chi-Squared Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Squared	.682[a]	1	.409		
Continuity Correction[b]	.232	1	.630		
Likelihood Ratio	.674	1	.412		
Fisher's Exact Test				.499	.313
Linear-by-Linear Association	.667	1	.414		
N of Valid Cases	45				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.80.

b. Computed only for a 2x2 table

Open-Ended Questions

In addition to the five research questions discussed in the summary of findings, this research also reviewed the open-ended response data from the survey. The two open-ended questions that allowed respondents free response were:

1) What incentives or superintendent job modifications would attract you to apply for a superintendent position in the future?

2) What changes to the educational system (Kindergarten – higher Ed.) would attract more female principals to become certified as superintendents?

These questions provided an opportunity for respondents to expand on the perceived barriers they have experienced as current female principals, while also eliciting suggestions to remedy potential barriers and generate more interest in the superintendent position for female principals.

Incentives and Job Modifications

Of the 50 respondents to the survey, 30 provided responses to *what incentives or job modifications would attract you to apply for a superintendent position.* Several of the 34 responses provided multiple suggestions for incentives and job modifications, thereby totaling 52 suggestions that would make the position of superintendent more attractive. Three patterns or themes became evident: 1) Items related to compensation of superintendents (29%), 2) scope of responsibility (37%) and 3) enhanced support and job security (19%).

Compensation. Within the survey, the compensation themes included responses pertaining to adequacy given job responsibility, sufficiency given additional degrees, and equity in relation to pay afforded male superintendents. Financial compensation given

job responsibilities for superintendents was iterated as, “Salary increase”, “Higher salary”, “Excellent health benefits”, and “Ability to carry all of my sick days to another district”. Increased salary and benefits were not the only types of compensation listed by female principals as an incentive. Five respondents included compensation for obtaining necessary coursework and educational costs associated with becoming a superintendent as an incentive to apply in the future. Several of the most common statements for this type of compensation included, “Paying for my doctorate”, and “Pay for tuition”. Others suggested, “Credit waivers from universities for administrative experience” and “Coursework reduction would make requirements more manageable”.

Two respondents wanted the guarantee of equitable compensation compared to their male superintendent counterparts. These responses included, “Equal pay as men” and “comparable compensation”. While only two respondents cited gender related compensation for female superintendents, their comments are evident that gender equity is still a perceived barrier to the superintendency for females.

Position responsibilities. The second theme that became evident pertained to the scope of responsibilities associated with the superintendency. Nineteen of the 52 suggestions, 37%, included the desirability of a modification in the extent of the responsibilities of a superintendent or the nature of some of these modifications. Respondent statements addressing the need for modifications to the responsibilities of the position were relatively similar:

- “Less evening commitments”
- “Regular work week with only a few evening meetings”
- “Flexible work schedule and evening child care”

Two others expressed this same sentiment when they indicated:

- "The job is too restrictive with evening meetings and community events and responsibilities. There would need to be a greater balance between the job responsibilities and my personal life for the position to be attractive to me"
- "In my opinion, the biggest drawback is that a superintendent needs to be present at meetings and events constantly"

Another respondent echoed the perceived level of responsibility and time commitment associated with the superintendency when she observed, "No one, except maybe the President of the United States, needs to be on call 24/7".

Besides unrealistic time commitment to the position, female principals also commented on their desire that the superintendency be restructured in ways to make it less political when they noted:

- "The political scope of the job – BOE traditionally having personal agendas rather than education of our children at the forefront of decisions. Not sure I have the "stomach" for the wheeling and dealing that takes place"
- "It seems that in order to succeed politically one has to sell their soul (to the board, the union, or some other special interest area specific to the school district)"
- "I think it is very political position and I'm not sure if it's something I'm interested in"
- "Less political, more focused on student success and learning while maintain being fiscally responsible"

- "A district that has a strong ability for administrators at all levels to work together for the betterment of the children and district and with less political ramifications"

Enhanced support and job security. The third theme that emerged was enhanced support and job security. Five respondents cited increasing support systems and mentoring programs stating: "internal internships within the school district" and "mentoring program". One respondent qualified the necessary support for her to entertain becoming a school superintendent, in the following words:

I would apply in a space where I know I would be mentored and supported to grow and succeed. It is a huge, public commitment at which I would not want to fail. It would be helpful to be a part of a support system or network that would be able to share my concerns and learn from so that I would be able to grow in my role.

Two respondents suggest support and networking is necessary for building level administrators in pursuing the superintendency. They contend:

- "Support with my current position in order to pursue superintendent certification. My current position as the sole administrator in my high school building is too demanding for me to pursue coursework"
- "It would be nice if there was a Western PA network (other than the Superintendent's forum) that allows for networking, mentoring, support etc."

Job security was also a concern for respondents leaving a principalship to become a superintendent since superintendents do not enjoy tenure and their contracts are limited in years. Responses include:

- "Security with job stability"

- "Longer contracts for job security"
- "I would consider becoming a superintendent at the end of my career – I'd do it "my way" to put students first and not have to play politics and worry about repercussions"
- "There is no guarantee – I do not feel safe accepting a 5 year contract somewhere when I need more than 5 years to retire"

Lastly, this open-ended question had a few unique, but interesting responses. Two respondents indicated they were satisfied with their current position and would not want to leave the principalship because they are either "too invested in their current position and their work is not done yet" or "because they do not want to lose the daily interaction with the children and be stuck in an office". Unfortunately, for each respondent that was satisfied with their current position there were an equal number of respondents that had either given up on becoming a superintendent or were so upset with the system that no incentives of job modifications would make the position appealing. Those respondents wrote, "Nothing, I have given up on gender equity" and "None. In this current political climate and constant attack on education, along with the continuing loss in funding I would be crazy to be a superintendent".

Changes to the Educational System

The second open-ended question had a different focus. While the first inquired about incentives and job modifications, the second asked, what changes could be made to the entire public education system to attract more females to become certified for the superintendency. This provoked 34 responses from the 50 survey respondents. Multiple

suggestions were given by several respondents equating to 37 suggested changes to public education that would entice female principals to become superintendent certified. Three themes were evident: 1) intrapersonal changes addressing local politics and school funding (38%), 2) structural changes regarding preparation programs and networks for females (26%), and 2) sociocultural changes relating to gender inequities perceived by respondents (24%).

Intrapersonal changes. The most prolific changes offered by respondent fell within the intrapersonal barrier taxonomy. Local level political changes suggested by respondents were:

- "School boards need to let supers do their job and not make it such a political balancing act"
- "School boards who are supportive and not trying to micro-manage district and building level administrators"

Four principals addressed changes necessary at the state level regarding uncertain funding for schools. These principals suggest:

- "A more stable budget"
- "More school funding to operate needed programs for students to be successful"
- "Equitable funding and a fair opportunity for educational leadership to focus on teaching and learning rather than worrying about funding"

Two other principals referred to the state and federal policies, and their inconsistency that schools operate under, noting:

- "The types of policies created and frequently revised at the state and federal levels"
- "Support for education- political support, public perception, financial support for education, unsupported mandated programs. GET RID OF TESTING!!!! Students and parents hate standardized tests".

Structural changes. Structural changes were the second most predominant theme of responses to the question about deserved changes for the educational system.

Principals suggested changes relating to the availability or adequacy of current networks, mentorships and internship opportunities. Five respondents indicated an increased need for connection between female principals and female superintendents stating:

- "The availability of internships with female superintendents"
- "More female role models"
- "In western PA there is a great network for female administrators, but it tends to meet only once per year"

One respondent indicated that she feels mentorships should be included within higher education:

> A mentor program integrated with the completion of a Doctorate degree would greatly interest me. I would like access to a program that specifically offers support (a current or retired female Superintendent) in the form of a mentor relationship.

Five principals provided suggestions for changing preparation programs at the university level, these principals were very consistent in their message. The focus for these female principals was time and money. A list of suggested changes include:

- "More online opportunities with blended class time"
- "Flexible higher ed. program for females with small children"
- "More consistent help with educational costs for attainment of certification"

One respondent's comment questioned the applicability of the content being taught in higher education courses that prepare future superintendents:

- "Higher ed. programs that actually teach what you will do as a supt. I learned nothing in my supt. program to prepare me for the superintendency"

Sociocultural changes. Female principal comments regarding sociocultural change yielded the most interesting and telling statement about gender equity in the superintendency. These comments did not propose changes, rather, they displayed the frustration of these women in working in a public education system that does not appreciate them as leaders. Several comments that reflected sociocultural concern included:

- "I don't need a specific network for all women – it would just be nice to be given the same respect as my male counterparts. They are treated VASTLY differently"

Another principal opined:

> It would help if there was a concerted effort by school board to seek out the expertise of female administrators and/or seek more diverse higher practices. There is a notion of equity and diversity. We want to have people in

> leadership that look like the children that they serve. Women and minorities often do not find their space in educational leadership in districts that serve predominantly minority student populations

Perceptions that female leadership styles are still not accepted, as compared to male leadership styles, one female principal hesitates to seek a superintendent position, commenting:

> There is a common and unfortunate stigma prevalent in our society that has me reluctant to even think that I can be a superintendent. It is the perception that a female leader can often be viewed as "bossy" (using a kind word here) while a man is often perceived as powerful

Another respondent has become so discouraged by the male power structure in public education that she has stopped applying for superintendent positions, instead noting:

> Eliminating the reliance on who one knows to move ahead to the next level; I gave up because I just did not know the right people, in most cases, credentials meant nothing because the "good-old-boys'-network" is very powerful….it is disgusting to me.

Other female principals commented on the pattern of a male dominated system as well:

- "Better acceptance of females in these traditionally male roles"
- "I am unsure – you can't change a mindset. The mindset is men are to be superintendents in most districts and there is the good old boys club"

One respondent is in the process of being interviewed for a superintendent position. She is feeling a negative sentiment from the community, stating:

> Support for women in higher positions. I am a finalist for a superintendent position at this current time. The community in which I am interviewing is frowning upon the district for bringing me to this level because I am a female. There is a perception that 'the town is not ready for a female superintendent'.

The open-ended question responses confirmed that female principals perceive a variety of barriers across all taxonomies. These include structural barriers such as lack of network and mentorships for female principals; intrapersonal barriers such as low compensation and the interference of work related duties with home life; and lastly, sociocultural barriers such as discrimination or exclusion based solely on gender and devaluing of the female perspectives and female accomplishments due to the gender of the candidate. The open-ended questions allowed the respondents to provide a richness to their thoughts and ideas about the position of superintendent of schools and public education. The survey afforded greater insight by hearing the voices of the female principals that represent the next generation of potential female superintendents.

Triangulation

To harness these practical and potentially effective suggestions made by female principals to increase female aspiration to the superintendency, a between methods triangulation of respondent narratives and respondent statistically significant data was conducted. According to Jike (1979), triangulation is the combination of multiple methods to examine the same phenomenon. In this study, survey data was analysis using quantitative statistics to determine which, if any, perceived barriers, may be impacting a female principals decision whether or not to pursue a superintendent position in the

future. Likewise, open-ended question narratives were analyzed using qualitative measures to determine how, if at all, perceived barriers to the superintendency could be reduced or eliminated through incentives, modifications or changes in the position or educational system. "The effectiveness of triangulation rests on the premise that the weakness in each single method will be compensated by the counter-balancing strengths of another (Jike, p. 604)", therefore, by combining the results of both methods a deeper understanding of the problem may become evident.

The triangulation of statistically significant survey results and the open-ended narrative results focused on respondent barrier taxonomy identification i.e., structural, sociocultural, intrapersonal. According to Derrington and Sharratt (2009) and Sharp et al., (2004) intrapersonal barrier identification is rising among female aspirants compared to structural and sociocultural barrier identification in Washington State and Illinois, Indiana, and Texas, respectively. To determine if that same trend is true in Western Pennsylvania, a triangulation of barrier response by survey respondents was developed. To create a triangulation table, open-ended responses to the question regarding incentives or modifications to the superintendent positon that would encourage females to apply were coded by barrier taxonomy, open-ended responses to the question regarding changes to the educational system that would encourage female principals to become superintendent certified were coded by barrier taxonomy, identified prevalent barriers, 50% or more, were coded by barrier taxonomy, identified formidable barriers, 3.0 or greater, were coded by barrier taxonomy, statistically significant barriers by demographic category were coded by barrier taxonomy and statistically significant barriers by intent to pursue the superintendency were coded by barrier taxonomy.

Table 53 displays barrier taxonomies and distribution of frequency counts and frequency percentage, by identified barrier taxonomy, for each statistically significant analyzed result and open-ended narrative response.

Table 53

Triangulation of Barrier Taxonomies

Barrier Taxonomy	Prevalence Count and %	Formidability Count and %	Significant Demographic Count and %	Intent to Pursue Count and %	Incentives Count and %	Changes to System Count and %
Intrapersonal	4 (57%)	8 (68%)	4 (33%)	0 (0%)	21 (62%)	13 (38%)
Sociocultural	3 (43%)	3 (23%)	2 (17%)	4 (67%)	1 (3%)	8 (24%)
Structural	0 (0%)	2 (15%)	6 (50%)	2 (33%)	7 (20%)	9 (26%)
Other	0 (0%)	0 (0%)	0 (0%)	0 (0%)	5 (15%)	4 (12%)
Total	7 (100%)	13 (100%)	12 (100%)	6 (100%)	34 (100%)	34 (100%)

Deciding whether triangulation results have converged or are divergent across multiple methods of analysis, quantitative and qualitative, is not a simplistic according to Todd Jike (1979). Assigning weight to a given test result is not easily accomplished when multiple methods are employed. For this triangulation, Table 53 displays that the most identified barrier taxonomy for two-thirds of the cumulative test results were intrapersonal barriers. Open-ended response narratives focused on incentives, modifications and changes to the educational system within the realm of barriers categorized as intrapersonal taxonomy. These results are congruent with the identification of the most prevalent and formidable perceived barriers to seeking the superintendency identified by female principals responding to the survey.

However, the triangulation also displays the divergent test results of perceived barriers identified by female principals of differing demographic category. These female principals only identified intrapersonal barriers one-third of the time, while structural

barriers were identified half of the time. More divergent were the results of perceived barriers identified as statistically significant by female principals that intend to pursue the superintendency in the future. Of these female principals, no intrapersonal barriers were identified as significant, rather all significant barriers were coded as sociocultural or structural, two-third and one-third of the time, respectively.

Jike (1979), indicates that a divergent results from triangulation should require the researcher to review and reconcile the differences for an underlying reason or alternate explanation. Chapter 5 will expand the discussion of convergent results to determine if the quantitative analysis results are validated by the triangulation results. Additionally, chapter 5 will expand the discussion of divergent results from the triangulation for alternate explanations or underlying rationales.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Introduction

Women comprise the majority of the workforce associated with schools, representing successful teachers, para-professionals, building administrators, secretaries, supervisors, custodians and transportation providers, yet women continue to be underrepresented in one major educational position, the ranks of superintendent of schools. As a number of authors have observed, this is troubling and raises the question of why female representation in the public school superintendency has been extremely low considering the number of females employed in these other capacities in public education (Brunner, 1998; Crabb, 1996; Craig & Hardy, 1996; Dana & Bourisaw, 2006; Derrington & Sharratt, 2009; Glass, 1992; Glass, 2000; Glass, Bjork, & Brunner, 2000; Grogan, 1994; Kamler, 2006; Meier & Wilkins, 2002; Mertz, 2006; Pavan, 1995; Skrla, Reyes, & Scheurich, 2000; Tallerico, 2000).

Thomas E. Glass (1992), an authority on the superintendency, has expressed grave concern about female underrepresentation and the apparent discouragement of female and other non-traditional aspirants for the superintendency, stating: "Considering the small number of minorities and women superintendents, job discrimination should be a national concern" (p. 27). Data from the Commonwealth of Pennsylvania demonstrate a similar disparity between male and female superintendents. The number of female superintendents in Pennsylvania increased to about 28% in 2009 and that number has remained relatively unchanged over the past four years in Pennsylvania (Buckheit, 2015). Holding consistent, for the 2014-2015 school year, 226 of 675, or approximately 28% of

the full-time public school district superintendents, were female, according to PDE data. This percentage, while not insubstantial, still pales in comparison to the nearly 72% of female teachers (87,016 of 120,794) represented in the Commonwealth's K-12 classrooms the same year and the nearly 49% occupying administrative positions other than the superintendency.

Purpose of the Study

The purpose of this study was to ascertain reasons why more females who currently occupy administrative positions in Pennsylvania school districts do not aspire to the superintendency or at least attain the qualifications necessary to become a part of the pool of qualified applicants. Pennsylvania districts have an interest in ensuring that the pool of superintendent applicants is inclusive of the most capable and talented individuals available to lead their systems and not artificially limited because of actual or perceived barriers that would discourage females from preparing and applying for the superintendency. Gaining a better understanding of why those females already exercising leadership roles in education are not considering the superintendency may allow districts to remove obstacles or address misperceptions about their existence, thereby enriching the human capital on which they may draw.

The research questions addressed in this study included:

1. At what rate do current female principals aspire to the superintendency in Western Pennsylvania?
2. What barriers and taxonomy of barriers do female principals perceive as most formidable in advancing to the superintendency?

3. Do the barriers or taxonomy of barriers differ based on the principal's age, family status, years of experience, school type, school size, district size, community type?
4. Do the perceived barriers or taxonomy of barriers differ among those female principals that have applied or intend to apply for the superintendency in the future and those that do not?
5. Are there differences in the rate with which female principals seek or intend to seek the superintendency associated with their age, family status, years of experience, school type, school size, district size, community type?

Data was collected for this study from an online line survey via SurveyMonkey.

The online survey invitation was sent by email to 204 potential female principals within Western Pennsylvania. For this study, 50 survey responses were collected by SurveyMonkey and used for data analysis within this study, equating to a 24.5% response rate. In addition to determining which barriers were perceived as important to aspiring to the superintendency for female principals, survey respondents were asked 10 demographic questions and two (2) open-ended response questions. The open-ended response questions asked respondents to provide suggestions to what educational system changes would attract more female principals to become certified as superintendents and what incentives or superintendent job modifications would attract respondents to apply for a superintendent position in the future.

Summary of Findings

Aspiration Rate

The first research question determined that 40% (20 of 50) of the responding female principals aspire to the superintendency. A 40% aspiration rate to the superintendency is markedly higher than the current 28% of female superintendents in Pennsylvania (Buckheit, 2015), and the 30.6% percentage of females holding superintendent certification in the state (PDE, 2014). Even with a small number of respondents to this survey, the data may suggest that perceived barriers to accessing the superintendency may not be as discouraging for female principals today than in the past.

Perceived Barriers and Associated Taxonomies

The second research question sought to determine which barriers and which taxonomies were most prevalent and which were considered most formidable by female principals in deciding whether or not to seek the superintendency. Of the 21 barriers, seven were considered prevalent, being identified by 50% or more of respondents. Of these seven particularly prevalent barriers, four were also evaluated as very formidable based on the intensity of the perceived barrier having a mean rating greater than 3.30.

The three most prevalent barriers were also the three barriers judged most formidable: 1) *Family concerns, restrictions, obligations*, prevalence = 72%, response mean = 3.8; 2) *Local politics (public, press, community, labor, and school board relations)*, prevalence = 72%, response mean = 3.66; and 3) *Inadequate compensation for level of responsibility and time commitment,* prevalence = 62%, response mean = 3.50. All three of these barriers identified as most prevalent and most formidable are associated

with the intrapersonal taxonomy. This pattern is consistent with findings of Sharp et al. (2004) and Derrington & Sharratt (2009) who found that females surveyed more recently rank intrapersonal or self-imposed considerations higher than structural or sociocultural barriers, which were more commonly cited reasons for not pursuing the superintendency in earlier studies reported in the literature.

Barriers and Respondent Demographics

The third research question examined relationships between seven respondent demographics and differences in the 21 perceived barriers. The seven demographic categories analyzed were: community type, years as a building principal, district size, building size, principal's age, building type, and family status.

Community type. A one-way ANOVA was used to determine if statistical differences exist between perceived barriers based on the community type of the principal's building. There was a significant effect of *Female superintendents are not well accepted by the community and school board* on community types for the conditions [$F(2, 46) = 3.24$, $p = .048$]. Post hoc comparisons revealed that the mean score for the urban principals ($M = 3.70$) was significantly different than the suburban principals ($M = 2.58$) and rural principals ($M = 2.73$). Wesson and Grady (1994) describe urban school districts as a highly bureaucratic/structured system. It is possible that suburban and rural schools are less bureaucratic, providing female principals in these districts with a greater efficacy in affecting change and potential sense of acceptance towards a female superintendent.

There was a significant effect of *Lack of networks and mentorships for female administrators* on community types for the conditions [F (2, 46) = 2.86, p = .068]. Post hoc comparisons indicated that the mean score for the rural principals (M = 3.27) was significantly different than the suburban principals (M = 2.46). However, the urban principals (M = 3.20) did not significantly differ from rural principals or suburban principals. This may suggest that principals in rural communities perceive travel distance as affecting their ability to build and sustain meaningful connection with other administrators, either within their own district or with surrounding networks as compared to female principals in suburban settings. Another plausible reason for this difference is that rural female principal's perceive the existence of an old boys' network within their districts, thereby limiting their access to networks and mentorships that would lead to the superintendency as compared to suburban principals (Kamler, 2006; Skrla et al., 2000).

Years as building principal. A one-way ANOVA was used to determine if statistical differences exist between perceived barriers based on principal experience. No significant differences were evident between principals of varying ages, therefore, similar perceived barriers in seeking a superintendent position were evident regardless of a female principal's age.

District size. A one-way ANOVA was used to determine if statistical differences exist in perceived barriers based on school district size. Female principals working within large school districts considered five different barriers, out of a possible 21 barriers, as statistically significant ($p < .10$) compared to female principals working in all other sized districts.

There was a significant effect of *A focus toward fiscal management* on district size for the conditions [F (3, 44) = 3.08, p = .037]. Post hoc comparisons indicated that the mean score for female principals in large districts (M = 4.33) was significantly different than principals serving very small districts (M = 3.08) and principals serving middle sized districts (M = 3.00). However, the principals serving small districts (M = 3.64) did not significantly differ from large district principals. This may suggest that fiscal management is perceived to be more valued by school boards of larger districts. Female superintendents most frequently (33%) cite the ability to be an instructional leader as the reason for their hiring, as compared to 3 percent of females that cited the ability to manage fiscal resources, a leadership skill stereotypically associated with males (Kowalski et al., 2011).

There was a significant effect of *Lack of preparation programs* on district size for the conditions [F (3, 44) = 3.57, p = .021]. Post hoc comparisons revealed that the mean score for female principals in large districts (M = 3.33) was significantly different compared to principals in small districts (M = 2.14). However, the principals serving very small districts (M = 2.92) and middle sized districts (M= 2.31) did not significantly differ from large district principals. This may suggest that female administrators perceive superintendent preparation programs as failing to adequately address educational issue prevalent in larger districts or fail to teach about differences in organizational complexity associated with district size.

There was a significant effect of *Female superintendents are not well accepted* on district size for the conditions [F (3, 44) = 2.70, p = .057]. Post hoc comparisons indicated that the mean score for female principals in large districts (M = 3.78) was

significantly different than principals serving small districts (M = 2.50). However, the principals serving very small districts (M = 2.58) and principals serving middle sized districts (M = 2.77) did not significantly differ from large district principals. It is possible that in smaller districts (more than 85% of female superintendents in the Kowalski et al., 2011 study were employed by middle-sized districts) the relationships are more personal and contributions of principals more readily known to stakeholders than in larger districts, leading to a more appropriate evaluation of the abilities of female administrators.

There was a significant effect of *No direct pathway from elementary* on district size at for the conditions [F (3, 44) = 3.97, p = .014]. Post hoc comparisons revealed that the mean score for female principals in large districts (M = 3.78) was significantly different than principals serving very small districts (M = 2.50) However, the principals serving small districts (M = 3.00) and principals serving middle sized districts (M = 2.92) did not significantly differ from large district principals.

There was a significant effect of *Female promotions tend to be horizontal* on district size for the conditions [F (3, 43) = 2.69, p = .058]. Post hoc comparisons indicated that the mean score for female principals in large districts (M = 3.78) was significantly different than principals serving very small districts (M = 2.50) However, the principals serving small districts (M = 3.15) and principals serving middle sized districts (M = 3.08) did not significantly differ from large district principals.

Similar to the barrier, *No direct pathway from the elementary*, the barrier, *Female promotions tend to be horizontal,* may be more formidable principals in large district in aspiring to the superintendency, than principals employed in very small districts. This

may suggest that smaller districts have assigned multiple roles and responsibilities to each administrator, thereby limiting the number of administrators within the district compared to larger districts. The expansive organizational chart of a large district may give the perception of lateral or horizontal movement for large district principals, in comparison to a more vertical organizational chart within a smaller district. Similarly, principals in larger districts may be discouraged when they unable to recognize a direct pathway from an elementary principal position to superintendency within these complex organizations.

Building size. A one-way ANOVA was used to determine if statistical differences exist between perceived barriers based varying building enrollments. There was a significant effect of the structural barrier *Professional organizations are not helpful in recruitment and placement of females in the superintendency* on building enrollments for the conditions [$F (2, 47) = 3.35$, $p = .044$]. Post hoc comparisons indicated that the mean score for the small building principals ($M = 3.60$) was significantly different than principals supervising medium sized buildings ($M = 2.64$). However, principals in buildings with large enrollments ($M = 2.89$) did not significantly differ from small building principals or medium sized building principals. It is possible that principals in small buildings are seeking administrative advancement in similarly sized districts. Because recruitment and placement services conducted by professional organizations are typically fee based, small districts may not widely use these fee based services to fill administrative positions as compared to districts with larger student enrollments.

There was a significant effect of the intrapersonal barrier, *Need to relocate* on building enrollments for the conditions [$F (2, 47) = 3.34$, $p = .044$]. Post hoc

comparisons revealed that the mean score for the principals supervising medium sized buildings (M = 3.35) was significantly different than the principals in buildings with large enrollments (M = 2.33). However, the small enrollment building (M = 2.90) did not significantly differ from medium sized building principals.

Age of principal. A one-way ANOVA was used to determine if statistical differences exist between perceived barriers based on a principal's age. Dependent variables were regrouped into three groups: young (30-40 years old), middle aged (41-50 years old), and veteran (51 years or older). No significant differences were evident between principals with varying years of experience for the three age groups for any of the perceived barriers, therefore, similar perceived barriers in seeking a superintendent position were evident regardless of years as a building principal.

Building type. An independent samples *t* test was conducted to compare perceived barriers to the superintendency for principals working in elementary (K—8) buildings and high school buildings (9-12). Based on the results of the independent samples *t* test, there was a significant difference in the scores for elementary principals (M=3.24) and high school principals (M=2.50) for *Need to relocate*; t(43) = 1.98, p = .054. It is possible that feeder elementary schools have smaller student enrollments than combining high schools. These smaller student enrollments and reduced number of supervised staff at elementary schools lead to a cohesive culture that is personally identifiable by the individuals working in these buildings. The perceived barrier of *need to relocate* would be more formidable to the elementary principals associated with these buildings than their counterparts supervising high schools.

Living with school-aged children. An independent samples *t* test was conducted to compare perceived barriers to the superintendency for principals living with school-aged children. There was a significant difference in the scores for principals without children (M=3.41) and principals with children (M=2.84) for the intrapersonal barrier, *Uncertain future of funding for public schools*; t(47) = 1.83, p = .074. Additionally, there was a significant difference in the scores for principals without children (M=3.12) and principals with children (M=2.25) for *Lack of preparation programs*; t(47) = 2.87, p = .018. It was anticipated that those with children would be more likely to cite intrapersonal barriers such as *Family concerns, restrictions and obligations*, than those with no children, which did not prove true.

The perceived barriers that display a difference were the intrapersonal barrier, *Uncertain future of funding for public schools* and the structural barrier, *Lack of preparation programs offered by colleges or professional organizations for ASPIRING female superintendents*. While *Uncertain future funding for public schools* is within the intrapersonal taxonomy, principals with no children found it more formidable, thereby, concluding that *Uncertain future funding for public schools* does not appear relate to having or not having school-aged children for these female principals. *Lack of preparation programs* is a barrier within the structural taxonomy and was not anticipated to be found statistically significant for two reasons. One, *Lack of preparation programs* is a structural taxonomy barrier where intrapersonal taxonomy barriers were expected. Secondly, this barrier appears unrelated to female principals having or not having school-aged children.

Of all these barriers, 50% of them were associated with the structural taxonomy, 33% with the intrapersonal taxonomy, and 17% with the sociocultural taxonomy of barriers. The dominate citation of structural barriers by female principals may indicate deficiencies within a particular demographic category. Specifically, this may suggest that structural impediments or structural benefits are not consistent across districts of varying size, buildings of varied student enrollments, buildings situated in differing community types, or buildings with specific aged students (elementary v. high school). Therefore, organizational policies and procedures that eliminate structural barriers for females to seek the superintendency must be implemented. Likewise, reviewing and revising existing organizational policies and procedures, that support female principals' in future administrative roles, must be an ongoing process to ensure their effectiveness.

Lastly, given the 21 perceived barriers and seven demographic categories that were analyzed for statistical significance, relatively few perceived barriers were identified. These results appears to indicate consistency, rather than differences, among demographics of female principal respondents in perceived barriers to seeking the superintendency.

Intent to Apply and Differences in Perceived Barriers

The fourth research question analyzed for a difference in means for perceived barriers among those female principals that have applied or intend to apply for the superintendency in the future and those that do not. Because intrapersonal reasons are particularly prominent as explanations for the lack of female superintendents in recent studies, Derrington and Sharratt (2009), female principals that intend to apply for the

superintendency would be expected to have cited fewer barriers associated with this taxonomy.

There was a significant difference in the scores for principals who intend to apply to the superintendency in the future (M=3.20) and principals that do not intend to apply (M=2.60) for the sociocultural barrier, *Female superintendents are not well accepted by community and school board*; t(48) = 1.71, p = .093.

There was a significant difference in the scores for principals who intend to apply to the superintendency in the future (M=3.25) and principals that do not intend to apply (M=2.63) for the structural barrier, *Lack of networks and mentorships for female administrators*; t(48) = 1.84, p = .072.

There was a significant difference in the scores for principals who intend to apply to the superintendency in the future (M=3.20) and principals that do not intend to apply (M=2.40) for the sociocultural barrier, *The perception that the superintendent needs to be an authoritarian rather than a participatory leader*; t(48) = 2.39, p = .021.

There was a significant difference in the scores for principals who intend to apply to the superintendency in the future (M=4.00) and principals that do not intend to apply (M=2.90) for the sociocultural barrier, *Female administrators need to work harder than male administrators to "show" or "prove" they are competent*; t(48) = 3.10, p = .003.

There was a significant difference in the scores for principals who intend to apply to the superintendency in the future (M=3.15) and principals that do not intend to apply (M=2.57) for the sociocultural barrier, *I would prefer to be recruited or offered my next administrative position rather than let my intentions be known*; t(48) = 1.78, p = .065.

There was a significant difference in the scores for principals who intend to apply to the superintendency in the future (M=3.45) and principals that do not intend to apply (M=2.82) for the structural barrier, *Female promotions tend to be horizontal reassignments (i.e., new title but same authority)*; $t(47) = 2.05$, $p = .046$.

Contrary to what might be expected, those principals who intend to apply related each of the identified barriers as more formidable than those who indicated no intension to pursue the superintendency. In review of the barriers, two-thirds were from the sociocultural taxonomy, one-third were structural in nature, and no intrapersonal barriers were identified. Because these principals intend to pursue the superintendency, however, intrapersonal barriers would be expected to be minimal, or as in this case, absent.

These female principals who intend to apply have demonstrated the forethought to identify those barriers that may exist in their pursuit of a superintendent position, yet, still indicate their intent to apply to the superintendency. The identification of additional barriers verifies their awareness of potential structural and sociocultural barriers and indicates they possess a sense of personal efficacy or the resiliency to overcome these barriers.

A majority of the literature on gender equity in the superintendency investigates former or current female superintendents (Brunner, 1998; Brunner, 2000; Glass, 1992; Glass, 2000; Glass, Bjork, & Brunner, 2000; Kowalski et al., 2011; Pavan, 1995; Sharp et al., 2004; Skrla, Reyes, & Scheurich, 2000; Sutton et al., 2008; Tallerico & Burstyn, 1993; Wesson and Grady, 1994; Wickham, 2007). More sparingly, studies investigating gender equity will focus on female aspirants to the superintendency (Brunner, & Peyton-Caire, 2000; Crabb, 1996; Derrington & Sharratt, 2009; Grogan, 1994; Kamler, 2006).

These studies delve into the experienced and perceived barriers of females, not only while holding the superintendent position, but also, those experiences and perceptions, related to gender equity, in their ascension to the superintendency. The notion that these female superintendents and superintendent aspirants were unaware of the potential barriers they may face as they began their rise through the educational ranks of their school systems is counterintuitive. Hence, the 40% of the female principals in this study who intend to seek the superintendency in the future have identified more barriers to the superintendency then those who do not intend to pursue the superintendency should not be surprising and may promise to alter the 28% status quo that has prevailed for the past five years in Pennsylvania.

Profile of Likely Superintendent Aspirants

Research question five sought to determine the most likely demographic characteristics of female principals that intend to apply for a superintendent position in the future. A chi-squared test of independence was performed to examine the relation between demographic category and the intent to apply for the superintendency in the future. The relation between age and intent to apply was significant, X^2 (2, N=50) = 6.74, $p < .10$. Younger principals were more likely to apply for the superintendency than were older principals.

Additionally, the relation between years of experience and intent to apply for the superintendency was significant X^2 (2, N=50) = 4.92, $p < .10$. Newly hired female principals (0-5 years of experience) were more likely to pursue the superintendency in the future than their more experienced female counterparts.

Reviewing the Chi-squared tests, years as a building principal and age were the two demographic characteristics related to an intent to pursue a superintendent position in the future. Younger female principals (30-40), with less years of experience (0-5 years) in the principalship are more likely to aspire to the superintendency than their counterparts that are 51 years of age or older and have 11 or more years of experience as a principal. Therefore, relatively newly hired female principals are the principals aspiring and expecting to obtain a superintendent position in the future.

However, there is a consistent decrease in a principal's intent to apply to the superintendency as the principal gains more experience as a building administrator or increases in age. To avoid a waning desire by these young female principals with limited experience to pursue a superintendency as they gain in age and experience, the structural and sociocultural barriers identified in research question four must be actively addressed by local school districts, professional organizations, and superintendent preparation programs.

Open-Ended Questions

In addition to the five research questions discussed in the summary of findings, the response data from two open-ended questions was reviewed. Four themes became evident: 1) Lack of mentorship and networks; 2) Scope of responsibilities; 3) Politics in the superintendency; and 4) Gender equity.

Lack of mentorships and networks. The first theme that emerged related to the availability or adequacy of current networks, mentorships and internship opportunities. Respondents indicated they would be more likely to aspire to the superintendency if there

was an increase or establishment of mentorships, networks and support systems designed specifically for females at the local or regional levels.

The lack of networks, mentorships, and internships for female administrators are frequently cited in the literature as one reason female administrators do not aspire to or attain the superintendency (Craig & Hardy, 1996; Glass, Bjork, & Brunner, 2000; Skrla, Reyes, & Scheurich, 2000; Sharp et al., 2004; Grogan, 2005; Kamler, 2006).

Scope of responsibilities. Suggestions relating to the scope of responsibilities of the superintendency focused on the perceived expectations of the superintendent position. Those expectations ranged from a drawback that, "a superintendent needs to be present at meetings and events constantly" to "No one, except maybe the President of the United States, needs to be on call 24/7".

According to Glass (2000) and other researchers (Glass, Bjork, & Brunner, 2000; Glass, 2001; Kowalski et al., 2011), the superintendency is experiencing a shortage of qualified applicants, regardless of gender. These shortages are directly related to long work hours, stressful working conditions and immensely time-consuming duties associated with being a superintendent.

Politics in the superintendent position. Female principals also commented on their desire that the political composition of the superintendency change, when they noted, "School boards need to let supers do their job and not make it such a political balancing act". School boards were not the only sources of political pressure, as one respondent observed, "It seems that in order to succeed politically one has to sell their soul (to the board, the union, or some other special interest area specific to the school district)". According to Craig and Hardy 1996, "Politics have been cited as a heavily

contributing factor by women exiting the superintendency." (p. 20). For this survey, politics was heavily cited as a reason to avoid entering the superintendency.

Gender equity. Female principal comments regarding sociocultural change displayed the frustration of working in a public education system that does not appreciate them as leaders. Several comments included, “There is a common and unfortunate stigma prevalent in our society that has me reluctant to even think that I can be a superintendent” and “I have given up on gender equity”. One respondent is feeling a negative sentiment from the community, stating, “The community in which I am interviewing is frowning upon the district for bringing me to this level because I am a female. There is a perception that ‘the town is not ready for a female superintendent’”.

The open-ended question responses confirmed that female principals perceive a variety of barriers across all taxonomies. These include structural barriers such as lack of network and mentorships for female principals; intrapersonal barriers such the interference of work related duties with home life; and lastly, sociocultural barriers such as discrimination or exclusion based solely on gender and the devaluing of the female perspectives.

Triangulation

To harness these practical and potentially effective suggestions made by female principals to increase female aspiration to the superintendency, a between methods triangulation of respondent narratives and respondent statistically significant data was conducted. In this study, survey data was analyzed using quantitative and qualitative approaches.

The triangulation of statistically significant survey results and the open-ended narrative results focused on respondent barrier taxonomy identification i.e., structural, sociocultural, intrapersonal. According to Derrington and Sharratt (2009) and Sharp et al., (2004) intrapersonal barrier identification is rising among female aspirants compared to structural and sociocultural barrier identification.

Table 53 displays barrier taxonomies and distribution of frequency counts and frequency percentage, by identified barrier taxonomy, for each statistically significant analyzed result and open-ended narrative response.

Table 53

Triangulation of Barrier Taxonomies

Barrier Taxonomy	Prevalence Count and %	Formidability Count and %	Significant Demographic Count and %	Intent to Pursue Count and %	Incentives Count and %	Changes to System Count and %
Intrapersonal	4 (57%)	8 (68%)	4 (33%)	0 (0%)	21 (62%)	13 (38%)
Sociocultural	3 (43%)	3 (23%)	2 (17%)	4 (67%)	1 (3%)	8 (24%)
Structural	0 (0%)	2 (15%)	6 (50%)	2 (33%)	7 (20%)	9 (26%)
Other	0 (0%)	0 (0%)	0 (0%)	0 (0%)	5 (15%)	4 (12%)
Total	7 (100%)	13 (100%)	12 (100%)	6 (100%)	34 (100%)	34 (100%)

Table 53 displays that the most identified barrier taxonomy for two-thirds of the cumulative test results were intrapersonal barriers. Open-ended response narratives focused on incentives, modifications and changes to the educational system within the realm of barriers categorized as intrapersonal taxonomy. These results are congruent with the identification of the most prevalent and formidable perceived barriers to seeking the superintendency identified by female principals responding to the survey.

However, the triangulation also displays the divergent test results of perceived barriers identified by female principals of differing demographic categories. These female principals only identified intrapersonal barriers one-third of the time, while structural barriers were identified half of the time. More divergent were the results of perceived barriers identified as statistically significant by female principals that intend to pursue the superintendency in the future. Of these female principals, no intrapersonal barriers were identified as significant, rather all significant barriers were coded as sociocultural or structural, two-third and one-third of the time, respectively.

Recommendations

The three barriers perceived by female principals as the most prevalent were identical to the three perceived as most formidable: 1) *Family concerns, restrictions, obligations*; 2) *Local politics (public, press, community, labor, school board relations*; and 3) *Inadequate compensation for level of responsibility and time commitment*. All three fall within the intrapersonal barrier taxonomy. Additionally, these barriers also dominated the narrative themes provided by respondents within the open-ended questions.

The recommended actions to reduce the impact of the three perceived, intrapersonal barriers must be addressed by school districts through structural and sociocultural actions. Only when the structure of public schools and societal bias towards women is addressed and changes implemented will female principals not internalize reasons for not aspiring to the superintendency.

Expanding Mentorships, Networking and Support Systems

The creation of networks, mentorships and recruitment programs, specifically designed for the advancement of female principals and placement of female superintendent aspirants will dramatically increase gender equity in the superintendency. Perceived barriers such as *Lack of networks and mentorships for female administrators*, *I would prefer to be recruited or offered my next administrative position*, and *Female administrators need to work harder than male administrators* could be reduced, if not eliminated over time.

The Pennsylvania Association of School Administrators (PASA) has established a PASA Women's Caucus for the purpose of developing networks among women and to increase the number of women in leadership roles. The PASA Women's Caucus is represented by nine regions across the state. PASA should expand these support and recruitment systems to a local level, establishing local chapters within intermediate units across the state. As current service providers for the Pennsylvania Department of Education, intermediate units have the ability to manage a local chapter of the PASA Women's Caucus and the familiarity of administrative staff at each local school district. PASA local chapters of the women's caucus should hold monthly meetings and regular events to develop networks among women with a goal of increasing women in leadership roles, specifically, the superintendency.

Institutions of higher education that prepare future superintendents through certification programs should employ more female professors, specifically, those that are superintendents or have previously served as superintendents. These experienced female administrators should take an active role in teaching superintendent preparation courses

and developing courses or course content aimed at developing female leaders in the field of education. Seven colleges or universities located within the Western Pennsylvania survey area provide state approved superintendent preparation programs. Those seven universities employ a combined 10 female, former superintendents, to teach a course(s) in their university's superintendent certification program.

Employing more female superintendents as university professors to serve as mentors to female aspirants will establish networks that rival the old boys' network for support of superintendent candidates as well as newly appointed superintendents. Female superintendents can provide guidance to candidates on gender-related issues facing females in their current administrative positions and that of the superintendency. These female superintendents can provide the first-hand knowledge of successful strategies to overcome barriers within the educational system that female candidates may experience on their rise through the administrative ranks to superintendent of schools.

Restructuring the Superintendency

To address the barriers of *Family concerns, restrictions, obligations*, and *Inadequate compensation for level of responsibility and time commitment,* the position of superintendent must be reconfigured to a gender neutral position rather than a male-advantaged position. What different family concerns, restrictions and obligations exist for females that do not exist for males; children, aging parents, maintaining a residence? It can be contended that both sexes have the same family concerns, restrictions and obligations, however, the difference lies in who is societally responsibility for directly assuming these duties.

Therefore, the current configuration of the superintendent position that includes expectations or *responsibilities and time commitments* that the superintendent is present at a majority of school events and activities, expects the superintendent to be "on call" for school board members, and expects the superintendent to facilitate weekly or multi-monthly evening meetings is inherently more advantageous to male candidates then their female counterparts. These male-advantaged expectations were evidenced in the 37% of the open-ended response narratives regarding incentives or modifications that would attract females to apply to the superintendency.

Local school boards need to adjust their expectations of the superintendent position to only include the educational duties for which they were hired; 1) advise the school board on policy, contract, and legal matters; 2) coordinate staffing and operations of the district; 3) oversee the district's educational programming, including teaching and learning; 4) provide fiscal management of the district; and 5) facilitate communication between the community and school district. School directors must be provided additional professional development opportunities through their professional organization, in the area of superintendent expectations and evaluations, if this mindset is to change. Given federal legislation and initiatives such as Every Student Succeeds Act (ESSA), Common Core State Standards, and mandatory state testing, the Pennsylvania School Boards Associated (PSBA) and Pennsylvania Association of School Administrators (PASA) need to expand professional development opportunities for school board members on critical skills and duties of a superintendent, and how to formally evaluate those skills and duties.

Pennsylvania School Boards Associated and Pennsylvania Association of School Administrators should increase the frequency and expand the locations in which professional development is provided to school directors. All-too-often, these professional development opportunities are conducted annually at state or national conferences or limited to events located near Harrisburg, PA. Limited school funding to pay for school director conferences and the inability of school directors to secure extended time away from work or personal situations, necessitate that these professional organizations conduct multiple events and trainings on superintendent expectations and evaluations in local or regional settings throughout the state.

Alter Policies Governing Superintendent Selection and Security

To reduce *Local politics* as a barrier to female principals in aspiring to the superintendency, the Commonwealth of Pennsylvania needs to provide additional governance on the search and selection process for superintendents and instruments used to evaluate superintendents. According to Mertz 2006, the process for hiring a superintendent of schools is unique compared to all other administrative positions in that the selection, recommendation, and hiring is solely conducted by local school boards. These processes and procedures are conducted without governance or guidance from the Pennsylvania public school code. Additional state policy governing the search and selection process of superintendents could reduce the unchecked authority of local school boards and make female applicants less susceptible to unstructured selection processes and vague selection criteria, both of which contribute to playing politics with superintendent selection.

School boards should be required, by Pennsylvania public school code, to interview qualified candidates from both genders for any superintendent opening, aside from, renewal of a current superintendent. Local school boards would not be mandated to hire any specific candidate or gender, however, by mandating the inclusion of females in superintendent interviews, a greater emphasis in selecting qualified candidates should be evidenced. Interviewing diverse superintendent candidates may serve to broaden the perspectives and choices of school boards in selecting a new superintendent.

The state needs also to address the evaluation of superintendents as a means of reducing political influences and promote job security. In 2012, Act 82 (2012) of the Pennsylvania public school code implemented an educator/principal effectiveness rating tool to be used in formal evaluations of all teachers, principals, CTC directors and non-teaching professionals within Pennsylvania. Accompanying the implementation of the educator effectiveness rating tool, professional development workshops were conducted for teachers, principals and supervisory staff. These professional development workshops not only explained the new rating tool, but also including training on how to conduct formal evaluations using the new rating tool to ensure consistency and effectiveness across the state.

Unfortunately, superintendents were omitted from being evaluated on a state mandated evaluation tool, rather Act 82 only required local school boards to evaluate superintendents annually on mutually developed objective performance standards. These objective performance standards must be mutually agreed upon by both the school board and superintendent. Once formulated, the objectives must be posted to the district website.

The Pennsylvania legislature needs to take the next step in ensuring consistent expectations in the superintendent position by include superintendents in the educator effectiveness model. Pennsylvania needs to create an evaluation rating tool that promotes student achievement and effective performance on educational duties of the position. Once this evaluation tool has been developed, it is important that board training be conducted on the use of the tool in formal superintendent evaluations. Only through consistency in the expectations of the position will females have the ability to meet and exceed those standards, rather than be subjected to local expectations and potential sociocultural bias of school boards.

Change Community and Societal Assumptions

The recommendations to: 1) expand mentorships, networks, and support systems for female aspirants; 2) restructure the superintendent position to reduce androcentric expectations; and 3) alter the policies and legislation governing the selection and evaluation of the superintendent in an effort to control local politics, should prove advantageous for females aspiring to the superintendency in the future. However, the implementation of these recommendations and the review of their effectiveness will take time. Too much time to be effective in helping the pool of qualified females currently seeking a superintendent position. More importantly, will the effective changes in policy and school structure change the culture of school districts and our society to one that views women as equally capable school leaders?

Societal change must start with awareness. An increased awareness campaign illuminating the barriers experiences by female administrators must be conducted by the

PASA women's caucus or the newly formed AASA women in leadership initiative, "More than a power lunch" (Minichello, 2016). These professional organizations need to support additional research on the topic of underrepresentation of females in the superintendency, form advocacy coalitions to influence state and national policy initiatives, and collaborate with both secondary and post-secondary educational institutions to promote leadership programs specifically for females.

These public awareness campaigns need to address both men and women in our schools and society. Only when both genders appreciate the gender disparity in this position, and the sometimes adversarial situations experienced by female educational leaders, will societal progress be made. Until the underrepresentation of females in the superintendency is at the forefront of classrooms in secondary schools, course work and course content in higher education, in meeting rooms in the Pennsylvania Department of Education, in meeting rooms in the Pennsylvania General Assembly, and in courtrooms across the state, will societal acceptance of females as educational leaders do more than creep forward.

Over time, attention dedicated to changing school board and community culture regarding the knowledge, contributions and abilities of females in district leadership roles will aid in alleviating stereotypes associated with males such as, *The perception that the superintendent needs to be an authoritarian rather than a participatory leader* and *Female superintendents are not well accepted by community and school boards*.

Limitations

A limitation to this study was the small sample size. An N=50 is a smaller data set than was hoped for or expected. The small sample necessitated using $p < .10$ rather

than the more customary $p < .05$ or $p < .001$. A $p < .10$ was used in this study to control type II error, failing to reject a null hypothesis that is actually true (Fraenkel and Wallen, 1996). A larger sample size would allow for a smaller alpha level, thereby better controlling type I and type II errors in the analyzed independent sample *t* tests and one-way ANOVAs.

The survey area was a limitation of this study, the survey invitation was distributed to female principals throughout the six most westerly intermediate units in Pennsylvania. The region includes both large and small school districts, wealthy and non-wealthy school districts and rural, suburban and urban school districts. However, school district diversity in Western Pennsylvania is markedly different than school districts in the central and eastern regions of Pennsylvania. Thereby, limiting the generalizability of the study to Western Pennsylvania.

Another limitation of the study, related to a small sample size, was the need to regroup demographic categories of respondents to reach a 20% threshold for each category. By regrouping, diversity within demographic categories was compromised as very specific demographic categories became large to meet the threshold. A larger sample size may have resulted in a more robust and varied demographic data set that may have produce statistical results for research questions that were more closely aligned with perceived prevalent and very formidable barriers (research question 1).

Lastly, the distribution email list used to elicit survey respondents was difficult to verify for accuracy. School district websites and intermediate unit directories were used to create and cross reference email addresses of current female principals within the survey area. However, 11% of the email addresses were rejected as undeliverable or

invalid. Additionally, of the 204 deliverable emails, it is unknown what percentage were actually received and/or read by a current female principal in the survey area.

Conclusions

Increasing female representation in the superintendency is a difficult task that cannot be accomplished through a specific incentive, simple modification to the position, or identification of a perceived barrier within public education. As Banks (2001) has observed, "firm explanations for the underrepresentation continue to elude us" (p. 77). Only through diligent research and proactive measures can females find equity in the highest administrative positon in a public school, that of superintendent.

As local educational entities, state professional organizations and higher education preparation programs reflect on their current practices, gender equity in the superintendency must be a priority. These entities must use a two-pronged, proactive approach to eliminate gender discrepancy in this position. First, these entities must eliminate the structural and sociocultural barriers that dissuade females from pursuing this male-dominated position through recruitment, mentorships, and encouragement as they become school leaders. They must help shape communal expectations and acceptance that fosters female superintendent aspirants in their intent to rise through administrative ranks. We can no longer rely on a female administrator's inherent motivations and individual resiliency to overcome gender disparity. Rather, active measures must be taken to ensure public schools employ the most capable and talented individuals available to lead their systems, ones that absent artificial barriers closely mirror our society.

Recommendations for Future Research

The study of female superintendents is still an under-researched topic. Literature on female superintendents and their experiences rising through the administrative ranks, attainment of a superintendent of schools position, and tenure as the school district's chief executive officer is sparse. Even less studied than female superintendents are female aspirants to the superintendency. Because the percentage of female superintendents in Pennsylvania (28%) is directly in line with the percentage of females certified to hold a superintendency (30.6%), more female principals must obtain superintendent certification, if female superintendent representation is to increase. Therefore, additional research needs to be conducted outside the survey area of this study to the entire Commonwealth of Pennsylvania and across other states in the U.S. to determine what barriers are perceived as dissuading female principals from obtaining certification or what incentives and modifications need to be implemented to encourage these female principals to become superintendent in the U.S.

Additional research should be conducted with current female superintendents to determine to what extent barriers they perceived to exist actually posed obstacles to their appointment or their tenure once hired. What were some of the unanticipated barriers which they confronted, and what strategies did they find effective in overcoming such anticipated and unanticipated barriers to their success.

Lastly, research should be conducted with current superintendents and superintendent aspirants to determine common personality characteristics that are prevalent within these individuals; specifically those personality characteristics related to risk-taking. Data from this study indicated that superintendent aspirants are keenly aware

of potential barriers to the superintendent position, yet these aspirants were still intending to seek a superintendency in the future. When also considering the concerns voiced by respondents relating to job security, female superintendent aspirants demonstrate a risk-taking personality. This personality characteristic is confirmed by C. Cryss Brunner as a strategy for success for female superintendents and echoed by Deborah Piscione (2014) who states that one of the seven (7) characteristics of bold risk-takers is the refusal to accept the status quo and that they are in touch with a much greater purpose in life. This appears to be the case with the women expressing an intent to pursue the superintendency in Western Pennsylvania and needs to be empirically confirmed in future research.

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Appendix A

Informed Consent

Study of Why Females Are Missing from the Superintendency

Dear Principal,

Thanks for responding to my invitation to participate in the study of Why Females Are Missing from the Superintendency in Western PA. Clicking you *consent to participate* below you will take an online survey via SurveyMonkey where you will be asked to evaluate 21 statements about considerations female administrators may take into account in deciding to seek the superintendency. Additionally, you will be asked a few demographic questions and have the opportunity to answer two opened ended questions about changes to make the superintendency more attractive to female administrators. The survey should not take you more than 10 to 12 minutes to complete.

This survey offers you an opportunity to have your voice heard on an important issue. However, you do not have to participate in this study. If you don't want to, you can click that you *disagree* below and you will be exited from the survey without losing any benefits to which you are entitled. If you agree to participate, you can stop participating at any time by simply exiting the survey.

The survey asks about items female administrators consider when deciding whether or not to pursue the superintendency. These questions may cause you to recall situations when you had negative emotional feelings. To this extent, you may be at risk of harm because of this research. The likelihood that you will be harmed is minimized because you will you can exit the survey at any time without any penalty whatsoever. While you may not individually benefit from completing this survey, it is my hope that a better understanding of what items are considered most important by female administrators in deciding whether or not to pursue the superintendency will help inform and reform school board policies and practices and contribute to greater female representation in this role.

Your privacy is important and I will handle all information collected about you in a confidential manner. I will report the results of the project in a way that will not identify you. This research has been approved by the YSU Institutional Review Board. If you have questions about this research please contact Ronald Rowe at XXXX@gmail.com or xxx.xxx.xxxx. or Charles Vergon, Dissertation Advisor at XXXX@ysu.edu or xxx.xxx.xxxx.

If you have questions about your rights as a participant in the study, you may contact the Office of Research at (xxx.xxx.xxxx.) or at xxxxx@ysu.edu

Because survey participation is anonymous, every potential respondent will receive a "reminder to participate" email in 5 and 10 days after the survey email. Finally, all potential respondents will receive a thank you for their consideration.

___ I verify that I am over 18 years of age and consent to participate in the survey
___ I do NOT want to participate in the study, exit me from the survey now.

Appendix B

Invitation to participate email

Invitation to Participate in an Important Study:

Why Are Females Missing from the Superintendency in PA?

Dear Principal,

Why are females underrepresented in the superintendency in western Pennsylvania? What considerations encourage and which dissuade them from deciding to seek the superintendency? This is the topic of my doctoral dissertation and the questions I respectfully request your assistance in answering by completing a brief survey that you will receive in the next three days. Since superintendents are drawn, predominately, from those that have once occupied the principalship, as you currently do, your participation and voice are important to be heard.

Please take 10 to 12 minutes to complete the survey that will be forwarded to your email in the next three days using SurveyMonkey. It asks you to evaluate 21 statements about considerations females may take into account in deciding whether or not to pursue the superintendency. Two opened ended questions allow you to recommend important changes that could make the superintendency more attractive to female administrators such as yourself. Your perspectives are very important. Results will be shared with directors of state administrative and school board associations, and the chairs of administrative preparation programs in western Pennsylvania and eastern Ohio to help improve the representation of females in the role of superintendent in western Pennsylvania.

Your participation in this study, being undertaken as part of my doctoral dissertation at Youngstown State University, is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty. The online study is anonymous. The results of the study will be disseminated as described above and may be published, but your name or school district will not be known. This research has been approved by the YSU Institutional Review Board. When you open the SurveyMonkey link you will review the Informed Consent provision for the study and the names of several contacts should you have any questions before completing the survey. Completing the survey will be considered your consent.

I understand how busy your jobs are and, consequently, I would be especially appreciative of your participation. Thank you for considering this request and adding your voice to the study on this important topic. Please know that for each completed survey, $2 dollars, will be donated to BCRF (Breast Cancer Research Foundation) in the name of Female School Administrators of Western Pennsylvania.

Sincerely,
Ronald R. Rowe, Jr.

Appendix C

Follow up correspondence/email

Subject: Help Answer the Questions Why Females are Missing from the Superintendency in PA.

Dear Principal,

Recently you received an invitation to participate in a study concerning ***why females are missing from the superintendency in western PA***. As a female administrator, your participation and voice are important to be heard on this topic. I respectfully request your participation in completing this brief survey using the hyperlink below.

SURVEYMONKEY>>>>>>>>>

I understand how busy your jobs are and would be appreciative of your participation in this 10 to 12 minutes survey. Please know that for each completed survey, $2 dollars, will be donated to BCRF (Breast Cancer Research Foundation) in the name of Female School Administrators of Western Pennsylvania.

Sincerely,

Ronald R. Rowe, Jr.

Appendix D

Survey instrument

1. **To what extent do you believe that the following items are considerations for females, such as yourself, in deciding to seek the superintendency?**

	Strongly Disagree 1	Disagree 2	Neither Agree Nor Disagree 3	Agree 4	Strongly Agree 5
1. The perception that the superintendent needs to possess a specific leadership style.	1	2	3	4	5
2. A focus towards fiscal management and away from student learning.	1	2	3	4	5
3. Lack of female role models for women in administrative positions.	1	2	3	4	5
4. You need to be a member of the "old boys' club" to become a superintendent	1	2	3	4	5
5. Uncertain future of funding for public schools.	1	2	3	4	5
6. Lack of preparation programs offered by colleges or professional organizations for ASPIRING female superintendents.	1	2	3	4	5
7. Female superintendents are not well accepted by community and school board	1	2	3	4	5
8. Accountability pressures.	1	2	3	4	5
9. Lack of networks and mentorships for female administrators.	1	2	3	4	5
10. Male faculty have difficulty working with female supervisors.	1	2	3	4	5

2. To what extent do you believe that the following items are considerations for females, such as yourself, in deciding to seek the superintendency?

	Strongly Disagree 1	Disagree 2	Neither Agree Nor Disagree 3	Agree 4	Strongly Agree 5
1. Local politics (public, press, community, labor, and school board relations).	1	2	3	4	5
2. Lack of pro-family policies or support services (e.g., childcare, telecommuting, flexible work schedules).	1	2	3	4	5
3. The perception that the superintendent needs to be an authoritarian rather than a participatory leader.	1	2	3	4	5
4. Inadequate compensation for level of responsibility and time commitment.	1	2	3	4	5
5. Professional organizations are not helpful in recruitment and placement of females in the superintendency.	1	2	3	4	5
6. Female administrators need to work harder than male administrators to “show” or “prove” they are competent.	1	2	3	4	5
7. Need to relocate.	1	2	3	4	5
8. No direct administrative pathway from elementary administration to superintendency.	1	2	3	4	5
9. I would prefer to be recruited or offered my next administrative position rather than apply or let my intentions be known.	1	2	3	4	5
10. Family concerns, restrictions, obligations.	1	2	3	4	5
11. Female promotions tend to be horizontal reassignments (i.e. new title but same authority).	1	2	3	4	5

Demographics Section

1. **Years as a building Principal?**
    a. 0-5
    b. 6-10
    c. 10-20
    d. over 20

2. **What is your highest earned degree?**
    a. Bachelor's degree
    b. Masters' degree
    c. Educational Specialists
    d. Doctoral degree

3. **Do you hold superintendent certification?**
    a. Yes
    b. No

4. **Do you intend to pursue the superintendency in the future?**
    a. Yes
    b. No

5. **What type of building do you currently supervise?**
    a. Elementary School
    b. Middle School / Jr. High School
    c. High School
    d. Other (Explain_____)

6. **In what type of community is your building located?**
    a. Urban
    b. Suburban
    c. Rural

7. **What is the student enrollment in your DISTRICT, January 2016?**
    a. 0-1500
    b. 1,501-3,000
    c. 3,001-5,000
    d. More than 5,000

8. **What is the student enrollment in your BUILDING, January 2016?**
    a. 0-99
    b. 100-299
    c. 300-599
    d. 600-999
    e. 1,000-1,999
    f. More than 2,000

9. **What is your age?**
    a. **< 30**
    b. **30–40**
    c. **41-50**
    d. **51-60**
    e. **>60**

10. **What is your family status?**
    a. Two-adult household
    b. Two adult household with school age child(ren)
    c. Single adult household
    d. Single parent household with school age child(ren)

Open-ended Section

1. **What changes to the educational system (Kindergarten – higher ed.) would attract more female principals to become certified as superintendents?**

2. **What incentives or superintendent job modifications would attract you to apply for a superintendent position in the future?**

Appendix E

Institutional Review Board Approval Letter

Youngstown
STATE UNIVERSITY

One University Plaza, Youngstown, Ohio 44555
Office of Grants and Sponsored Programs
330.941.2377
www.ysu.edu

April 19, 2016

Dr. Charles Vergon, Principal Investigator
Mr. Ronald R. Rowe, Jr., Co-investigator
Department of Educational Foundations, Research, Technology & Leadership
UNIVERSITY

RE: HSRC Protocol Number: 162-2016
Title: A Quantitative Study of Why Female Administrators Do Not Aspire to the Superintendency in Western Pennsylvania

Dear Dr. Vergon and Mr. Rowe:

The Institutional Review Board has reviewed the abovementioned protocol and determined that the Phase I portion of your project is exempt from full committee review based on a DHHS Category 3 exemption. Please submit an expedited/full review protocol form for Phase II of your project.

Any changes in your research activity should be promptly reported to the Institutional Review Board and may not be initiated without IRB approval except where necessary to eliminate hazard to human subjects. Any unanticipated problems involving risks to subjects should also be promptly reported to the IRB.

The IRB would like to extend its best wishes to you in the conduct of this study.

Sincerely,

XXXXXXXXXXXX

Mr. Michael A. Hripko
Associate Vice President for Research
Authorized Institutional Official

MAH:cc

c: Dr. Charles Vergon, Chair
Department of Educational Foundations, Research, Technology & Leadership