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FACTORS INFLUENCING THE MAJOR SATISFACTION AND LEADERSHIP
ASPIRATIONS OF MEN AND WOMEN IN TRADITIONAL AND
NONTRADITIONAL FIELDS

Jennifer L. Yeoward

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This thesis reports the results of an online survey study that examined the associations of role-model influences, support/guidance, and socioeconomic status (SES) with college students' major satisfaction and leadership aspirations. Of the 558 students who responded to the survey invitation, data from 494 students who had provided responses on the main variables were included in the major analyses. Contrary to hypotheses, SES and the nontraditionality of students' majors were not significantly related to leadership aspirations or major satisfaction. The results did support the hypotheses that support/guidance and inspiration/modeling would be associated with students' leadership aspirations and major satisfaction, but these associations did not vary as a function of the nontraditionality of students' fields. Additional analyses revealed that among those in relatively nontraditional fields, there was no significant difference between men and women in regards to the associations of role-model influences and support with leadership aspirations. The findings suggest that support and role-model influences are important factors in determining the major satisfaction and leadership aspirations individuals regardless of their gender or the nontraditionality of their fields.

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NONTRADITIONAL FIELDS

JENNIFER L. YEOWARD

A Thesis Submitted in Partial
Fulfillment of the Requirements
for the Degree of

MASTER OF SCIENCE

Department of Psychology

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JENNIFER L. YEOWARD

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CHAPTER I

INTRODUCTION

Although women now comprise half of the United States' (U.S) labor force, specific sectors are highly stratified by sex. Of the 338 occupations for which the Bureau of Labor Statistics (2012) keeps demographic information, over 50% are considered nontraditional for either a man or a woman because people of one sex make up less than 25% of the employees in them. In some fields, the proportion of employees of one sex is dramatic. For example, among occupations like construction work, mechanical engineering, firefighting, and aircraft piloting, women make up less than 7% of the employees. In other fields, men are minorities, making up less than 20% of social workers, preschool through elementary school teachers, occupational therapists, and nurses. Not only is this stratification seen across fields, but it can also be seen in specific positions within fields. For example, women are the majority of workers in the health care professions overall, including doctors, nurses, aides, and technicians; however, they only make up 24% of dentists in comparison to 99% of dental hygienists. Within education, men comprise 52% of postsecondary teachers but less than 2% of preschool and elementary teachers.

There are numerous reasons why such significant gender stratification is potentially problematic. First, a highly stratified work force may limit the degree to which people perceive a variety of careers as being possibilities for themselves. Humans

are social beings, and they strive to find their place in society. Whether they are aware of doing so or not, humans may use vocational choice as a way “to belong, be respected, and live a comfortable life as defined by the individual’s reference group” (Gottfredson, 2005, p. 81). Identifying careers as masculine or feminine is something that many people have done their whole lives without being conscious of it. For example, children grow up associating particular careers as for “boys” or “girls” due to personal influences, such as knowing someone in that particular field or simply through having been exposed to the occupations’ typical employees via the media (Gottfredson, 2005). If the occupations that are sex-typical coincide with the person’s abilities, interests, and values, there may not be a problem for the individual. If those occupations that are sex-typical are inconsistent with his or her interests and abilities, however, then difficulty finding a satisfying career choice is likely to occur. Due to identifying particular occupations as masculine or feminine and being driven to fit in comfortably in society, people may unnecessarily eliminate from consideration potentially satisfying career choices and settle for ones that are less than optimal.

Second, stratification in the work force has the potential to decrease creativity and novel ideas (Ehrhart & Sandler, 1987). Due to socialization, men and women often have different kinds of life experiences, and these differing experiences can enhance occupations in positive ways. Having more diverse work teams has been shown to increase innovation, productivity, and creativity (Wegge, Roth, Neubach, Schmidt, & Kanfer, 2008). With increased technology that is becoming available in the workforce, it may be beneficial for agencies to employ more women to incorporate their input regarding programs, products, and their effectiveness (Ehrhart & Sandler, 1987). The

same can be said for men entering the traditionally female fields of elementary school teaching and nursing. For example, some boys may misbehave in class because they may not respond well to the authority of a woman, or they may not understand the manner in which a female teacher is explaining something. A male teacher could be a positive role model for boys who have behavioral issues, and men may be able to find a way to explain concepts to younger boys that differs from the way female teachers explain material. Similarly, with fields like nursing, some men may not be comfortable having a female take care of them, due to religious reasons or personal beliefs, and having male nurses on staff could help make medical procedures more palatable or acceptable to men. Additionally, male patients might make more medical problems, such as those related to sexual functioning, known to a male nurse because they feel more understood or less embarrassed than if they were speaking with a female nurse.

A final reason why it may be useful to reduce the work force's stratification is that it could decrease the gap that exists between how much men and women are paid. As of 2011, women aged 20-24 were, on average, being paid 92% of what men were making despite working comparable hours (Bureau of Labor Statistics, 2012). Although this gap in pay has narrowed remarkably from the 76% of men's salaries they were being paid in 1979, women are still not receiving the same wages as men, especially when it comes to the older generations. For example, women aged 55-64 are only being paid 75% of what men their same age are being paid. Even though the percentage of what women are making appears to be closing in on what men are making, some of the recent gains are due to high unemployment rates among men during the economic recession (Bureau of Labor Statistics, 2012). There remain substantial differences in the salaries of employees

in traditionally masculine and feminine fields, even among those requiring similar levels of education. For example, the average salary of the traditionally masculine occupation of roofing is \$33,630, whereas that for the traditionally female occupation of secretary is \$29,050 (Bureau of Labor Statistics, 2012). Among most fields in which the majority of employees are female, the average salary is lower than those in which the majority of employees is male. Reducing the work force's stratification may be one way to reduce the degree to which women are underpaid, and therefore remain in a position of lower status and power, in comparison to men.

The “Leaky Pipeline” Problem

One strategy for reducing the stratification of the work force would be to increase the proportion of people whose sex is non-traditional for a given field who consider entering it. For example, there have been efforts to increase the proportion of girls who consider college majors in science, technology, engineering, and math (STEM) fields (Blickenstaff, 2005). This strategy is logical, because if there are not enough people of one sex considering an occupation, it is unlikely that the occupation will become more diverse with respect to the gender of its employees.

It is not just at the point of entry that problems contributing to occupational fields' sex stratification occur. Fouad and colleagues (2010) speak of an analogy of women's participation in STEM fields as a “leaky pipeline.” Essentially, not much difference is seen between boys and girls in math and science preferences until around the 8th grade. Thus, the potential pool of future scientists and mathematicians is equally male and female until around 8th grade. At that point, when they begin selecting their own courses, fewer girls than boys select advanced math and science courses, which makes the

potential pool of future employees more likely to be male. The lack of selection of math and science classes continues through college major choices, where the distinction gets even more pronounced. By now, female “leakage” from the pipeline has become so significant that the vast majority of potential future employees is male. Even if they enter an occupation field, women are more likely to leave engineering and math careers than are men (Blickenstaff, 2005). Finally, once they are established in non-traditional careers, women are less likely than men to advance to positions of leadership (Smith, 2012). The lack of women in positions of leadership could be due to the fact that women tend to be more interested in interpersonal relationships in the workplace as opposed to status attainment (Eddleston, Veiga, & Powell, 2006). Ultimately, however, the number of gender minorities in their career fields who make it to the most visible positions in their fields is very small due to their leakage all throughout the pipeline.

Although Fouad and colleagues (2010) used the analogy of a leaky pipeline to show how women are filtered out of the fields of math and science until only a small number are left, the same analogy could also be used to some degree for men entering nontraditional fields. Though more men are entering the field of nursing than in the past, there is a significant difference between the male and female drop-out or failure rates. The rate at which women tend to drop-out or fail out of nursing programs is roughly 35%, whereas men tend to either drop-out or fail at a rate of 85% (Evans & Frank, 2003). Thus, the pipeline analogy seems applicable for men until the point of establishment in a career. Men’s experiences in this non-traditional field appear to differ from the experiences of women in traditionally masculine careers after that point. When men do successfully complete a nursing program, they are expected to transfer into fields that are

more prestigious, such as intensive care, surgery, or psychiatry, if not being quickly promoted to an administrative position (Evans & Frank, 2003); this quick push into more prestigious sectors of an occupation is a phenomenon known as the glass escalator (Smith, 2012). In addition, men, in general, tend to have a more salient career role, so they may be more willing to spend extra time at work to get ahead in their careers (Eddleston, Veiga, & Powell, 2006). This effect would also contribute to helping men “climb the ladder” to leadership positions in traditionally female dominated careers more so than do women in traditionally masculine fields.

Reasons for Gender Minorities’ Higher Rates of Loss from the Pipeline

A number of barriers or challenges have been identified as potential reasons for gender minorities’ high rates of leaving non-traditional fields. These include harassment and discrimination (Cook & Minnotte, 1998), fewer opportunities (Sewell & Hauser, 1975), lower expectations (Evans & Frank, 2003), and attributing failure to incompetence (Haynes & Lawrence, 2012).

Much research has been done regarding the harassment and discrimination that women feel in the workplace, particularly when they are working in traditionally masculine fields. For example, Cook and Minnotte (1998) found that women tend not to receive the same social benefits as their male counterparts in traditionally male-dominated fields. They claimed that women are discriminated against by having to work twice as hard as men to be taken seriously in their chosen field.

There is evidence that men in traditionally feminine fields experience high rates of harassment and discrimination as well. For example, in the field of nursing, many men are bombarded with comments about their occupation being “unmanly,” questions about

why they are not doctors, or even questions about their sexuality (Evans & Frank, 2003). These high rates of harassment and discrimination for both men and women in non-traditional fields may help account for their high rates of attrition for the fields even if they initially select them.

Low expectations for success may also contribute to high rates of departure from non-traditional fields. While men in the nursing field tend to have their training oriented towards the possibility of them gaining prestigious positions, they are still subjected to some ideas of lower expectations. The lower expectations are due to other women in the field expecting less commitment from men in the “less prestigious” sectors of the nursing field (Evans & Frank, 2003). This expectation of less commitment appears to contribute to the pressure for men to move up in the administrative area of the nursing field. As for the lower expectations expected for women, many people still hold the stereotypical belief that it is not economically sound to hire a woman for an upper level position because she may (a) get married and leave, (b) have children and leave or be gone for an extended period of time, or (c) have to move for her husband’s job and will vacate her current position. For women conducting male sex-typed roles, there is an expectation that they will not succeed. When women are engaging in male dominated tasks, the common thought is, “...she is not supposed to do well, so it is not her fault that she didn’t...” (Haynes & Lawrence, 2012, p. 561). Haynes and Lawrence (2012) found that when only the outcome (failure) of a task is known, women become the scapegoat when it was known that men and women worked together on a task; they tend to receive more of the blame and others are unwilling to work with them again on a future task.

Potential Resources to Counter the Increased Challenges Faced by Gender Minorities

Due to the increased challenges they face once they have entered non-traditional fields, experts (e.g., Betz & Fitzgerald, 1987, p. 141) have argued that people who are gender minorities in their field of choice will need additional resources and supports. For example, interpersonal influences, such as access to role models and encouragement and support from others, may help to counteract the negative influences presented by the challenges to their continuation in non-traditional fields. In fact, the dominant career development theory, Social Cognitive Career Theory (SCCT; Lent, Brown, & Hackett, 1994), proposes that contextual influences, like support from role models and encouragement from others, are critical in people's implementation of behaviors related to their career choices. In fact, research has documented an increased likelihood of women to aspire to leadership positions within STEM fields if they have access to career role models (Nauta, Epperson, & Kahn, 1998). Other research (Schaefers, Epperson, & Nauta, 1997) has linked encouragement/support to women's likelihood of staying in non-traditional majors. In contrast to the above research on women's experiences in non-traditional fields, very little research has examined supportive factors associated with men's likelihood of remaining in traditionally female occupations. It is unknown to what degree role model influences and support/encouragement from others are associated with men's staying in non-traditional fields.

In addition, socioeconomic status (SES) can be seen as a factor that might either encourage or discourage people's continuation in non-traditional fields, depending on the person's gender. Lease (2003) found that in research among men, higher SES tended to

correlate positively with continuing into a traditionally male-dominated career, which tended to require more education. This finding could imply that women who come from a higher SES background would also be more likely to pursue traditionally male-dominated careers due to the greater amount of education (and, hence, resources) required. Men who come from a lower SES background are an interesting population to consider. They may gravitate toward traditionally female-dominated careers because they do not require as much education because they may not have the means to continue their education, or due to having stronger gender stereotypes, they may be more inclined to participate in fields such as roofing, construction, garbage collection, etc. The association between family SES and the likelihood of remaining in a non-traditional career field has not been well-studied overall.

Purpose of this Study

The purpose of this study was to determine the degree to which three specific theoretically-facilitative factors – SES, access to and influence from career role models, and support/encouragement from others – are associated with a person’s likelihood of staying in a chosen career field and becoming a visible leader in it once they have initially selected it.

This study examined the experiences of both men and women, and it consisted of a survey administered to a general student population from a large, public university. Students responded to questions about the degree to which they have positive influences from career role models, the degree to which they have support and encouragement from others in their lives with respect to career decision-making, and demographic questions assessing SES. These factors were examined as predictors of variables serving as indices

of the likelihood that students will remain in the pipeline of their chosen fields. Specifically, they were linked to students' satisfaction with their majors (a good predictor of whether someone persists in the major versus changes to a different one) and the degree to which students aspire to leadership positions within those fields.

The non-traditionality of students' chosen fields was calculated based on their responses to questions about their majors and the careers to which they are aspiring. Although the Bureau of Labor Statistics classifies occupations as non-traditional for people of one sex when more than 75% of employees in the occupation are of the other sex, for this study non-traditionality scores were continuous because of the very small number of students who met the criteria for non-traditionality using the dichotomous conceptualization. In this study the percent of people of the opposite sex in a student's major and intended career served as the (continuous) index of non-traditionality, which permitted an examination of whether the supportive factors (role model influences, support/encouragement, and SES) are more strongly predictive of the major satisfaction and leadership aspirations of students in non-traditional fields than of those in traditional fields.

CHAPTER II

REVIEW OF THE LITERATURE

Over the years, a lot of research has focused on women's roles in different aspects of society. In particular, over the past century and a half, the roles of women in the workforce have shifted drastically, which is why it is important to examine the historical employment trends that have occurred in the United States and how they have changed over time. In this chapter, historical trends in employment for women and men will be reviewed. Additionally, this section also contains a review of theories and previous research that lead to the idea that that role model influence, support, and SES may be associated with the leadership aspirations and major satisfaction of students in non-traditional fields. The chapter concludes with the study's hypotheses and a rationale for each.

Definition of Career

Almost all people engage in activities that might be considered in some contexts to be work or labor. For example, most adults at some point will prepare meals for themselves and for others. A small number of people, chefs, do so as a career. Unless they do so for pay, though, these activities would not be considered to be someone's career; rather they are viewed simply as personal responsibilities.

People also frequently have jobs in which they work for pay but that are not considered part of their careers. It is not unusual for high school students to work as babysitters, waiters, cashiers, or mow people's yards to earn money, for example. These

sorts of jobs also are not typically considered to be representative of one's career because they are usually temporary and are viewed solely as a means of earning money or gaining experience rather than reflecting one's identity.

The notion of *career* typically denotes a more significant commitment on the part of the person who selects it and engages in activities related to it. Spilerman (1977) defines a career as the progression of occupational positions that a person performs throughout his or her lifetime. Most people think of a career as a pattern of positions, typically related to each other, that a person obtains and engages in over the course of his or her life and that become part of a person's identity. This thinking allows for the possibility that someone changes jobs or job settings, while still maintaining their career. For example, someone might begin working in an automobile oil change shop and, with increased skills, obtain other related positions that use the same sorts of skills, even if they are in different settings, such as specialty auto body shops. Even though the person changes jobs, because they are related and because they represent the person's principle activities for paid employment, they represent his or her career. The person may consider herself or himself to have the career of auto mechanic and views all the jobs that he or she has engaged in to be part of his or her experience in that career.

Thus, a career is typically considered to be a person's principle work, engaged in for pay, and often becomes part of a person's identity. Although some people may become involved in a career simply by chance because circumstances made that career feasible (Krumboltz, 2009), there is often an assumption that people have made a choice to enter or remain in a career field.

Historical Trends in U.S. Employment

Throughout the course of the United States' history, the roles of men and women in the labor force, and hence their career choices, have changed drastically. Prior to the 1900s, people did not have a lot of choice in regards to careers. Out of necessity, most men became farmers, and most women ended up working in the home to help their husbands and raise families. Until the 19th century, it was thought that if a woman pursued a professional interest, she would bring disgrace to her family (Showalter, 1971). At this time, only a very few occupations—such as writing novels for female readers—were open to women. Many people, however, did not take these women seriously, and they were judged by different standards than those by which male authors were judged (Showalter, 1971). Once the early 1900s approached, advances in farm technology meant fewer men needed to work as farmers, and they could spend more time obtaining education. These advancements opened up other career possibilities, such as physicians, writers, or just about any other job that required a college education. This time was the first that most men were really able to make choices about their careers. Unfortunately, it was a different story for women. If women were involved in work outside the home, it was almost always as a nurse, teacher, or secretary, because those service occupations were deemed socially acceptable for women. Over the years, these types of jobs earned the title of “pink-collar” jobs due to their long-standing association with women (Greene & Stitt-Gohdes, 1997). These positions also came with strict regulations. For example, up until the early 20th century many women were not allowed to be employed as teachers if they were married (Fernández, 2013).

The integration of both sexes in particular areas of the labor force has often come about due to circumstances resulting in a shortage of workers. Until the Civil War era, even teaching was considered a male profession. Due to a shortage of men available to teach at that time, teaching slowly turned into a female-dominated profession. After this shortage, women continued to choose to remain in the teaching profession so that they could become self-supporting. Women began to experience a shortage of responsibilities in the home due to the industrial era, so entering the teaching field, once the strict regulations lifted, allowed women to help provide for their families as well as fulfill most women's desires to help society (Phillips, 2011).

Another shift in sex-typed occupations occurred during the 1940s due to a shortage of male employees, as they were fighting overseas during World War II (Herr, Cramer, & Niles, 2004). Due to the media using campaigns like "Rosie the Riveter," many women received encouragement to join traditionally masculine careers, such as those involving production and machinery (Fernández, 2013). By using the media, many women were able to contribute to the sense of patriotism that the government was attempting to create on the "home front." That sense of patriotism was much more important than trying to have women conform to the stereotypical women's roles of the time. The increased involvement of women in mechanical and production careers during the war led to the realization that women are capable of performing in those careers, but people still did not consider these to be appropriate, full-time careers for women outside the context of wartime. Thus, after the war, although some women remained in the workforce, most occupations continued to be highly stratified by sex, and if women made career choices it was from within a limited range of options.

In the 1960s, in part due to the feminist movement, many people began for the first time to question why the workforce is stratified by sex and whether there is reason for it to continue to be stratified. Those in the feminist movement issued strong calls for equal rights and salaries in the work force, and they attempted to raise awareness of gender inequalities. Even those not in the feminist movement began to question exactly what factors made this phenomenon occur and worked towards developing theories to explain why the sex stratification was occurring (Herr, Cramer, & Niles, 2004). This transition, however, has not been as clear-cut for men entering traditionally female-dominated careers. In reviewing a collection of data from the 1970-1990 census, Gatta and Roos (2005) found that the following types of men tended to enter female-dominated careers: being non-White or foreign born, having poor English speaking skills, lower educational attainment, and being below the poverty line. Bradley (1993) interpreted these trends as suggesting that men tend to enter female-dominated professions when they lack better opportunities.

Eventually, as more women began expressing a desire for equality in the workforce, researchers (e.g., Betz & Fitzgerald, 1987, p. 185) began examining environmental factors that might contribute to sex stratification and women's concentration in positions of low status, power, and salary. Research on gender socialization processes began to shed light on reasons why boys and girls may exhibit different preferences for courses in high school, and career theorists began to speculate how these differences would translate into career choices (Gottfredson, 1997).

In the 1970s, 1980s, and 1990s, widespread efforts were made to reduce sex inequalities in education. For example, studies had shown that educational environments

that encouraged competition tended to result in higher achievements for the male students; when cooperation was encouraged in the classroom, however, female students tended to be able to experience higher achievement (Fennema & Peterson, 1986; Peterson & Fennema, 1985). Additionally, a movement that has continued to help decrease sex inequality in education has involved encouraging parents to support their children, especially their daughters, to strive for academic achievement (Callahan & Reis, 1996). By showing this support, young girls are being told that they have the same capabilities to succeed in the classroom as boys of their age. This same movement has encouraged teachers to provide the same support for all students' achievements, as opposed to differentially reinforcing boys and girls for accomplishments in traditionally masculine (e.g., math) and feminine (e.g., penmanship) skill areas.

Current U.S. Work Force Demographics

Women's participation in the U.S. work force has continued to increase, and now they comprise half of the total employees in the U.S. labor market. There are some pockets of the workforce, and particular careers, however, which remain highly stratified by gender. If more than 75% of employees in an occupation are of one sex, that career is considered to be traditional for the majority sex (Bureau of Labor Statistics, 2012). In many fields there is a big difference between the percentages of male and female employees. For example, women make up only 22% of chiropractors and chefs or head cooks, 21% of clergy and camera operators in the areas of television and film, 16% of couriers and messengers, 13% of police officers, 11% of cost estimators, 9% of surveyors, 8% of computer network architects, groundskeepers, and constructions and building inspectors, 6% of railway conductors, 5% of pest control service employees and

truck drivers, 3% of construction laborers, and 2% of carpenters, roofers, and highway maintenance workers.

The distribution of men in female-dominated careers closely resembles that of women in male-dominated careers. For example, men make up just 17% of models, demonstrators, and product promoters, 14% of paralegals and special education teachers, 13% of librarians and tellers, 12% of maids and housecleaning service employees, 11% of word processors and typists, 9% of teacher's assistants, 8% of receptionists and information clerks, 7% of dietitians, hairdressers, and payroll and timekeeping clerks, and 5% of speech language pathologists and secretaries or administrative assistants (Bureau of Labor Statistics, 2012).

Trajectories of Loss of Gender Minorities from Stratified Occupations

The work force's gender stratification appears to occur over time in a fashion that has been likened to a "leaky pipeline" (Fouad et al., 2010). In this analogy, the pool of potential future professionals in an occupation starts out as quite large, encompassing both boys and girls. By late childhood, boys and girls identify some careers as being "for men," and others as being "for women," which is likely to affect their consideration of those careers (Gottfredson, 2005). By high school, fewer girls than boys elect to take advanced math and science classes despite having equal ability test scores (Betz & Fitzgerald, 1987, p. 100). By the time students reach college, it is clear that gender stratification has already become quite pronounced, as some majors have very small percentages of students of one sex. For careers that require a college degree, the gender stratification of the future workforce is already evident, as only those with a college major related to the career will be eligible to enter the career. For example, the University

of Illinois at Urbana-Champaign tends to be a university that is well noted for its engineering program. On the website, they noted that of the 5,400 undergraduate students enrolled in the engineering program, only 17-20% of those students are female (University of Illinois, 2013). The number of men enrolled in typical bachelor's and master's level nursing programs is somewhere between 8.9% and 10.4% (Turner, 2013).

Two theoretical explanations for the loss of minorities from the pipeline of non-traditional careers prior to the point of entry have been offered. Super (1953) theorized that a career choice is an attempt for a person to implement his or her self-concept. The self-concept is seen as being socially constructed, and people have a pattern of choosing careers that are consistent with societal views of what is acceptable for one's sex. Lemkau (1984) believed that men who entered female-dominated occupations were more likely to have experienced the loss of a parent, particularly their father (and therefore a less well-defined masculine self-concept), in comparison to men who were employed in traditionally male fields. Whereas this idea has since been disproven, it may still be that boys who strongly identify with fathers who have traditionally masculine occupations are less likely to consider traditionally female careers for themselves.

Another theory that identifies why men and women may tend to go into stereotypically traditional careers is Gottfredson's (2005) Theory of Circumscription and Compromise. One of the main ideas in her theory is circumscription, which is a process of a person narrowing down, or cutting off from consideration, careers from their full list of possible choices. Individuals may not end up considering a particular career due to it interfering with the self-concept they have developed for themselves.

According to Gottfredson (2005), the process of circumscription occurs in four stages. The first stage occurs when children are younger, around the ages of three to five years-old, and in this stage, children tend to classify people in simple ways, such as big and strong, or little and weak. In this stage, children are able to identify with a particular adult role. The second stage occurs between the ages of six and eight. In this stage, children are able to distinguish between occupations based upon something simple, sex role, which includes things like sex-appropriate clothes and behaviors. The third stage occurs between the ages of 9 and 13, and it involves recognizing the differences in social status, such as, which jobs have a higher status, and what characteristics are associated with those higher jobs. In this stage, children begin to eliminate occupations that, in their opinion, do not have a high enough level of prestige for them. The final stage of circumscription begins at age 14, and it involves children being able to identify what their interests and values are, determining which careers fit those interests, and rejecting fields they deem as incompatible with their own interests.

According to Gottfredson, many children would have eliminated some careers from consideration by the time they reach the age of six to eight, because that is when they establish their tolerable sex-type boundary. Obviously the boundary varies for different people, because some people do consider and enter non-traditional careers, but Gottfredson (2005) believes that the problem of gender stratification in the work force has its roots at this early stage in life. She contends that due to the current stratification of the work force many children draw conclusions about the masculinity and femininity of occupations and begin dropping them from consideration if they do not fit with their views of themselves as masculine or feminine.

Also involved in the process of circumscription is the concept of tolerable effort boundary. That is, people determine whether or not a career is suitable for them based upon whether or not there is too much risk or effort involved in attempting to obtain that career. One concept that can be seen as an important factor in the tolerable effort boundary would be a person's socioeconomic status (SES). SES can be viewed as a combination of different factors such as a person's income, their parents' income, their parents' highest level of education obtained, the amount of education the individual has obtained, and their parents' current occupation, and it generally refers to the extent of economic resources that are available to a person. To demonstrate how this theory would apply itself, imagine a person with low SES. This person's family may be making enough money just to get by with the bills, but not enough money to afford any type of luxury. For this person, going to college is a luxury. He or she may realize that it is possible to receive financial aid assistance to attend school, but he or she may not have a way to afford their books or any of the other supplies needed at school. This person may look at all of the work needed to afford college, as well as the risk involved in the application process and in trying to make ends meet, and he or she may decide that although it means giving up on a career of more interest, it is more practical to find a job that he or she knows is attainable and that will help him or her pay the bills.

Not being able to achieve a preferred career choice will bring about compromise. With this stage, the individual will need to consider occupations they consider to be less preferable (Dodson & Borders, 2006). This consideration can occur when a person anticipates future barriers that may occur on the way to achieving the preferred career. It can also occur after the barriers have been encountered. When it comes to sacrificing

something, individuals will first sacrifice their interests, then the prestige of their job, and finally the sex type of the job. In other words, according to Gottfredson, people are more likely to accept a career that is less-than-ideal in terms of a fit with their interests than they are to violate their views about themselves with respect to tolerable effort, prestige, and the sex-type of a career. She believes people will not give strong consideration to any careers that they consider to be beyond their effort level, lower than their tolerable prestige level, and discrepant from their sex type.

It is not just at the point of entry into a career, however, where the loss of gender minorities from fields occurs. It is important to acknowledge that when they do enter non-traditional careers, men and women often report having difficult experiences (e.g., Chusmir, 1990), leading to lower satisfaction with their majors and careers and a greater likelihood of leaving those majors and careers. It can be assumed that factors that contribute to the wage gap can also be attributed to factors that could reduce satisfaction with a career, such as being in conflict with family and work responsibilities, having to relocate due to a partner's job, not having an optimal amount of education, the possibility of not having the same career goals as others in similar or different fields, having leadership qualities and experiences, having role-models or mentors, the reality that a lot of occupations are still segregated, and the discrimination that still occurs in the work place (Yoder, 1999).

Finally, for women, loss from male-dominated careers is disproportionately high for positions of leadership. When women enter male-dominated fields, they are less likely to advance to high positions. The term glass ceiling refers to the phenomenon where women, having entered a given career, are blocked from advancement above a certain

level for no apparent reason other than their gender. There is also a new phenomenon that women are experiencing known as the “glass cliff.” This experience occurs when women in non-traditional fields end up receiving positions of power, but these positions of power are for companies or projects that are not expected to have high success rates (Phillips, 2011). Because of this power, women end up being less likely to succeed in leadership positions and being blamed for not succeeding on an impossible task.

It is interesting to note that this tendency is not true of men. In fact, when men enter traditionally female careers, they are actually more likely to be elevated to positions of leadership. For example, the field of nursing is one where men tend to quickly move up the ladder and gain success, a phenomenon known as the “glass escalator” (Phillips, 2011) or a positive token effect (Folge & Merrill, 1986). In nursing, men tend to move away from the more traditional caretaker roles and move into specialty fields, like being in the operating room or in psychiatry, or they may move into administrative roles, which tend to be associated with increased status and pay. This overachieving effect occurs due to men being expected to specialize in particular areas and due to being pushed into the more prestigious areas (Evans & Frank, 2003).

Contributing Factors to the Loss of Gender Minorities from Occupations

Researchers have examined reasons for the high rates of loss of gender minorities from career fields. Both anecdotal and empirical evidence suggest that discrimination, harassment, low expectations, and critical reactions from others may serve as deterrents for those who enter non-traditional careers.

Although the Civil Rights Act of 1964 prohibits employment discrimination based on sex, subtle forms of discrimination may still occur. For example, Phillips (2011)

documented that for women in school administration positions there was a perception that the educational institution had a history of hiring and promoting male colleagues and that there was a negative perception from the school board regarding women as managers. Whether or not these perceptions are founded, the belief that women are not highly regarded may deter female teachers from pursuing administrative positions within the district. Women also may end up not receiving the same benefits in employment settings as men, such as being left out of important social networks that most men receive in their fields (Herr et al., 2004). Studies also show that women may be recipients of hostile treatment in the workplace, such as experiencing sexist comments and attitudes, double standards, enduring remediation policies and practices, not being socialized with, and being the ones that have to balance their personal obligations as well as their work obligations (Stokes, Riger, & Sullivan, 1995). To give an example, compared to women in traditionally female-dominated careers, female firefighters are more likely to state that they experience sexist behavior and job stress and are less likely to feel valued by their coworkers (Yoder & McDonald, 1998).

Women in non-traditional career fields also may experience either quid pro quo harassment or hostile environment harassment (Norton, 2002). Essentially, quid pro quo harassment occurs when an employee feels forced, either directly or indirectly, to make a decision between losing some benefit of their career, such as a raise, promotion, or even their job all together, or meeting the supervisor's sexual demands. Hostile environment harassment was defined by MacKinon (1979) as sexual harassment causing the work environment to become uncomfortable, causing the victim to feel embarrassed, or even resulting in the victim being unable to effectively continue executing their job duties.

When hostile harassment occurs in the workplace, the action is not so much about the sexual nature as it is more about creating the sense of power, either via job status or even sex status (Childers, 1993).

Men also experience harassment and discrimination, and the rates of these negative experiences appear to be higher for those working in non-traditional fields. One of the biggest obstacles men in non-traditional fields report encountering revolves around others questioning their motivations to enter that field and their sexual orientation. For example, when male nurses are trying to give care to their patients, they consistently have to worry about whether or not someone is interpreting their touch as sexual in nature, especially when it comes to children and wanting to give them a comforting hug (Evans & Frank, 2003). Men employed in early childhood or elementary education are also subjected to the same scrutiny and biases that male nurses face (Galbraith, 1992). On the other hand, some men in traditionally feminine fields have reported that they are automatically assumed to be a “manly man” and conform to stereotypical male norms (Furr, 2002). When this stereotype is assumed, women in the particular job ask men to do the more physically demanding tasks due to their supposed heightened level of masculinity.

Of course, as is true with women as well, men’s experiences in traditionally female career fields are not limited to unintentional forms of harassment. They also are sometimes victims of a physical assault, they may experience psychological harm, and they experience abuses of power (Vaux, 1993). Collectively, these forms of harassment and hostility can serve as deterrents to continuing in a career field.

Real or perceived constraints may also deter gender minorities from remaining in non-traditional fields. For example, Phillips (2011) noted that some women in non-traditional fields tend to feel they will not be successful due to family responsibilities and an unwillingness to relocate if necessary. Interpersonally, women tend to experience a greater amount of work-to-family conflict, which means that participating in any paid work activity will make it difficult for a woman to attend to family needs. This conflict can happen if a woman is asked to work overtime with little warning, and she may feel like she is unable to meet her responsibilities at home, such as making dinner or helping her children with homework. Work-to-family conflict is seen as a big concern because it has been linked to negative outcomes like distress, reduced family cohesion and marital satisfaction, strain, and social withdrawal (Cook & Minnotte, 2008). There is also the potential that women may have lower self-efficacy expectations due to having few opportunities to demonstrate successful task accomplishments in male-dominated fields. Women pursuing non-traditional careers also tend to receive less encouragement from counselors and others, when anxiety becomes a barrier to self-efficacy for them, which would make the expectation of personal efficacy weakened for women (Herr, Cramer, & Niles, 2004). Collectively, all these stressors when coupled with other deterrents for pursuing a non-traditional career, may cause women to leave them at a higher rate.

Finally, perceptions of low competence may also contribute to loss from non-traditional career fields. For example, Lewis and Kaltreider (1976) and Ott (1980) found that women in nontraditional vocational training courses tended to identify their male peers as frequent critics of their work. Many women in non-traditional fields believe they are viewed as less competent by their coworkers, which results in them needing to work

harder to be taken as seriously (Cook & Minnotte, 2008). The negative, stereotypical view of women not only exists with her coworkers, but it also exists with the customers to whom she provides services. Customers frequenting areas where men are the predominant employees tend to be uncomfortable when interacting with a female employee. In addition, these customers tend to have a decreased level of satisfaction when the employee does not match the sex-type of the particular job (Cook & Minnotte, 2008). Negative views of one's competence can also be a barrier for men in traditionally female careers. Evans and Frank (2003) documented that male nurses tend to receive negative reactions from patients, co-workers, and others in society.

In sum, both women and men in non-traditional careers may experience a variety of negative reactions from others and have a variety of negative experiences that serve as deterrents to staying in those fields. Although employees in any fields may experience harassment and discrimination, these seem to be particularly likely to occur in gender-stratified work environments. In addition, the loss of gender minorities from non-traditional fields is of particular concern because their numbers are lower even from the point of entry into the field. Thus, it would be useful to consider ways to reduce the loss of gender minorities from their career fields once they enter them.

Resources Facilitating Gender Minorities' Continuance in Non-traditional Careers

Because of the challenges they face in their careers, those who are gender minorities in their field of choice may need additional supportive influences (Betz & Fitzgerald, 1987). There are some resources that serve as facilitators to career development and advancement for many people, and it is possible that, if they are available to gender minorities in career fields, they might help to counteract some of the

challenges discussed above. Social Cognitive Career Theory (Lent, Brown, & Hackett, 1994) discusses different influences on a person's career choice and how all of those influences interact with one another. For the purpose of this study, two categories of influences are of importance: (1) the background contextual influence of SES, and (2) the proximal contextual influences of role models and support/encouragement from others.

SES

According to Social Cognitive Career Theory, background contextual influences are any characteristics of one's family, neighborhood, community, or culture that might contribute to learning experiences, a person's self-views, or his or her beliefs about the likelihood of various outcomes. As acknowledged by Gottfredson (2005), SES is one such influence on a person's learning experiences and possible career choices. When a person's family has substantial resources, pursuing careers that require a college degree is more feasible, and pursuing careers in which there is some level of risk is perhaps more tolerable. For example, if a woman is uncertain about her ability to succeed in a traditionally masculine career field, having adequate familial resources may allow her to feel free to take a risk in pursuing it despite her doubts, because she could rely on family assistance if she fails. On the other hand, a person whose family does not have adequate resources may feel compelled to take a "safer" career path, often one that is gender stereotypical, in order to have a higher likelihood of success.

Lower SES may also make it more difficult for a person to utilize resources that would help when faced with career challenges. For example, if a man experiencing gender harassment or discrimination in the workplace has adequate resources, he may seek professional legal assistance, but those from lower SES backgrounds may find it

more challenging to enlist the support of professionals. These factors may decrease the likelihood that those with low SES persist in non-traditional experiences when there are hostile environments.

Research has shown that children tend to choose careers that are similar to the socioeconomic patterns of their parents (Sewell & Hauser, 1975), and one factor that contributes to this is the idea that children from lower SES backgrounds tend not to have the financial resources necessary to obtain a career that exceeds that of their parents (Burwood, 1992). In particular, SES is a significant variable that is present in those who attend college, but Williams (1996) noted that it does not seem to have an effect on any particular major because, historically, attending college has traditionally been something that only those with a higher SES level would be able to do.

It is unclear exactly how SES relates to a person's likelihood of staying in a non-traditional field. It can be assumed that women are likely to enter into nontraditional careers because, for them, that means being able to surpass the level of education and prestige of their parents. No research has examined whether SES is associated with an increased or decreased likelihood of staying in a non-traditional field once it has been selected. In addition, it is unclear what association SES has with a man's decisions to remain in a non-traditional field. Historically, men have often pursued the occupations of their fathers, which made it unlikely that they would deviate from the status-level of their fathers' careers. Men pursuing non-traditional careers have typically made a choice to differ from their fathers, so it is unclear what association SES has with their decisions to remain in those fields. It could be speculated that resources help to alleviate other stressors, such as those encountered when one is a minority in her or his career field, so

perhaps the association between SES and staying in a non-traditional field will be positive.

Proximal Interpersonal Contextual Influences

Social Cognitive Career Theory also acknowledges the existence of proximal contextual influences. These influences come from a person's current social environment, as opposed to the background from which one comes. Proximal contextual influences are any social or economic resources that facilitate a person's career development by helping him or her to navigate challenges, persist despite doubts, or weather storms.

Role model influences. One example of a proximal contextual influence that may be relevant for people who are gender minorities in their academic or career fields is career role models. A role model is defined as a person whom another person wishes to emulate, even though the other person, the role model, may not be aware of this particular individual (Downing et al., 2005). Because the individual does not need to be known personally, a role model could be a real or fictional person. For example, someone could want to emulate his or her favorite character in a book or television show he or she may really enjoy. The astrophysicist Sally Ride was a powerful career role model for many women who did not know her personally because she was a highly visible pioneer in a non-traditional field.

Role models can be considered global or specific (Gibson 2003). A global role model is seen as someone an individual is trying to emulate particular characteristics from, such as skills traits and behaviors. A specific role model is defined as someone who an individual only pays attention to particular attention to a small set of attributes. Gibson (2003) also defines different structural dimensions of role models, such as close versus

distant. A close role model is defined as someone who has the potential to be affiliated with the same peer group as the individual and in some way interacts with the individual frequently. A distant role model may be considered as being outside of the individual's peer group and may infrequently interact with the individual, if ever. There are also different levels of role models, such as a superior role model versus a peer/subordinate role model. A superior role model is a person who holds a higher position or status than the individual, which is the definition with which most people attribute the term "role-model." A peer or subordinate role model is classified as someone who may be looked at as the same as the individual, or the role model may even have lower status than the individual as long as he or she demonstrates some skill or attribute the modeler deems worthy of emulation.

Role models can also be classified in terms of types, and Bucher and Stelling (1977) were able to classify the differences amongst those types. A partial role model is someone who influences the modeler in a specific way in part of his or her life, such as by demonstrating a certain characteristic or how to perform a specific skill. A charismatic role model is someone who will inspire individuals to model their behavior because they are perceived as admirable. A stage role model is someone who influences an individual by demonstrating what he or she should or should not do at different stages, or points throughout life. This type of role model can educate an individual, directly or indirectly, on the appropriateness of different actions at different stages in life. An option role model is someone who supplies the modeler with alternate views or options of behavior paths to take that he or she may not have previously considered or thought possible. This style can

especially be seen when the person is a negative role model because the role model will serve as a message of what not to do.

Theoretically, role models may serve to increase the likelihood that someone persists in a career field despite encountering challenges, particularly if the role model is viewed as being similar to the self in some important way such as his or her sex (Bandura, 1986). First, a successful role model can serve as a form of positive vicarious learning experience that increases self-efficacy. For example, a new male elementary school teacher who has a more advanced male teacher as a career role model may have less reason to doubt his ability to succeed in the field because he has a model of success as inspiration. Second, career role models can serve as a form of informational guidance. For example, if a female construction worker is experiencing harassment on the job but has a senior role model in her work place, she might benefit from hearing or observing how her role model has handled harassment experiences. The degree to which a person has been impacted by a role model is referred to as role model influence.

There is empirical support documenting the importance of role models on people's career experiences in general. Role models can challenge occupational stereotypes for men and women in regards to what careers are available to them (Eccles, 1985). Role models are an especially good source for people to figure out what types of careers will be successful for them (Farmer, 1997). When it comes to figuring out how to deal with issues like sexism, having a same-sex role model has proven to be more influential than an opposite-sex model (Stake & Noonan, 1985).

There is also information suggesting that career role models may be especially beneficial for women in non-traditional fields. Lunneborg and Lunneborg (1985) found

that both male and female role models influence the careers of women who hold a nontraditional work orientation. Throughout their educational career, these role models manifested as different groups of people: parents, siblings, teachers, friends, and other adults. These role models were all reported by the women as being positive influences.

Shepard and Marshall (2000) found that women particularly seek role models to resolve conflicting values between work and family. Nauta, Epperson, and Kahn (1998) found that women in the STEM fields were more likely to feel successful about the idea of balancing family and work responsibilities when they had role models in their career field. Furthermore, this increase in self-efficacy was likely to help make women feel more confident about becoming a leader in their particular STEM field.

Dasgupta and Asgari (2004) found that women who were exposed to female leader role models created an automatic association of leadership qualities with women in the college community. This association allowed women to envision themselves in leadership roles. The authors concluded that having frequent interactions with female leaders in college led to a reduction in gender stereotypes. The greater the exposure to female leaders, the greater the likelihood women will abandon gender stereotypes that limit their leadership potentials.

Role models may be as important for men as they are for women. One reason that more men have been entering female-dominated careers is because there have been new role models emerging from those fields (Chusmir, 1990). These positive role models are especially important because some men in nontraditional vocational education programs tend to feel as though they receive less support and encouragement from people like school personnel and their parents (Kendall, 1983; Indiana State Board of Education,

1977; Shann, 1983). Very little research has examined the experiences of men in non-traditional careers, so it is unknown whether role model influences are associated with a greater likelihood of staying in a non-traditional field and becoming a leader in it.

Support and encouragement. A second form of interpersonal influence that can be viewed as a proximal contextual influence in the Social Cognitive Career Theory model is support or encouragement from others. Support/encouragement can appear in four different forms (House, 1981). The first appears in the context of emotional/esteem support is seen when someone provides empathy, trustworthiness, and availability to listen to other's problems. With this support comes the feeling that someone is concerned for the well-being of another. The second form of support appears as informational support is shown through the provision of information, such as concrete advice or suggestions. Next, instrumental support involves behaviors that directly help a person. It is a form of tangible assistance, such as money, transportation, or labor. Lastly, appraisal support involves someone providing honest feedback about people and their work. Another person's affirmation, feedback, or positive social comparison may assist individuals in evaluate themselves when they experience doubts about their capabilities.

There is empirical evidence suggesting that encouragement and support are important in the career experiences of women in non-traditional fields. Hawley (1972) found that both women in traditional and nontraditional fields chose careers they felt were consistent with what the important men in their lives wanted. Studies done by Hawley (1972), Tangri (1972), and Trigg and Perlman (1976) found that women viewed encouragement and support from the important men in their lives as a motivating factor

in the pursuit of a career, and it is especially true for the women who entered nontraditional careers.

Astin and Leland (1991) learned that support systems can help to mediate the loneliness and isolation that women often experience in senior-level positions. Nobbe and Manning (1997) found that the use of support systems can be beneficial in achieving a work-life balance. Receiving encouragement and support from both a mother and father tended to be among the most important factors cited by women in regards to their decisions to seek nontraditional careers (Lunneborg & Lunneborg, 1985).

In fields that are predominantly male, having female mentors can provide the encouragement and support that women aspiring to senior-level positions may need (Stirling, 2013). Blackhurst (2000) found that women student affairs administrators had a reduction in role conflict at work and an increase in women's commitment to their institution when they participated in mentoring programs.

Although Houser and Garvey (1983) found that women in non-traditional fields had received more support and encouragement from their parents to pursue non-traditional careers than had women in traditional fields, quite a bit of evidence suggests that those who are gender minorities in their fields of choice experience discouragement or a lack of support at times. Turner, Bernt, and Pecora (2002) found that women pursuing technical positions in information technology tended to report that their fathers were positive influences on their career choices, but they reported being frequently discouraged by teachers, guidance counselors, and male professors.

Men in non-traditional fields also tend to experience the same difficulties in gaining support for their career choices. Evans and Frank (2003) reported that a majority

of male nurses felt their only source of support was from one another. They have a lot of negative reactions from patients, co-workers, and others in society.

In summary, theories suggest role model influences, support/encouragement from others, and SES would be associated with non-traditional career choices, satisfaction with those choices, and leadership aspirations. These variables have been studied to a limited degree as predictors of women's non-traditional career choices, but they have typically been examined as predictors of non-traditional career entry. Little is known about whether these influences continue to exert an influence on the non-traditional career pipeline by increasing the likelihood that a woman remains in a non-traditional field and aspires to a leadership position. In addition, far less is known about how these factors relate to men's non-traditional career choices. Researchers have just begun examining factors associated with men's decisions to pursue non-traditional careers, and virtually no research has examined the factors associated with satisfaction in those fields and the likelihood of becoming a leader.

The Present Study's Purpose and Hypotheses

The purpose of the present study was to examine how SES, role model influences, and support/encouragement relate to the experiences of students in college. The focus of the current study is on the experiences of people who have already made some initial commitment to a career field by selecting a college major. Because major satisfaction is strongly related to students' actual persistence in their majors over time (Nauta, 2007), assessing students' satisfaction with their majors can serve as a reasonable early indicator of the likelihood that the student will earn a degree and be eligible to obtain a career in her/his current discipline. Another variable of interest in the current study is leadership

aspirations. This variable is important because increasing the number of highly visible gender minorities in occupations may be one way to reduce the gender stratification of the workforce over time. Theoretically, gender minorities in highly visible occupations (e.g., those involving leadership) may help to reduce perceptions that an occupation is for members of one sex only (Gottfredson, 2005). Through vicarious learning (Bandura, 1986), for example, young girls who see successful female CEOs of businesses may see that it is possible for women to succeed in highly competitive business environments. On the other hand, given men's tendencies to be overrepresented in positions of leadership, it may be important to see what variables are predictive of intentions to remain in non-leadership positions (e.g., elementary school teaching rather than school administration). Finding out what helps some men perceive it is acceptable to work in a standard female-dominated career field would help to increase visibility for future generations of boys. For example, young boys who have male elementary school teachers may, through vicarious learning) perceive that becoming a teacher is a good option for them as well.

Among those in traditional and non-traditional majors, this study examined the associations of SES, role model influences, and career support/encouragement from others with students' satisfaction with their majors and their plans to become leaders in their fields. Socioeconomic status was conceptualized as a facilitative background contextual influence variable that may facilitate career development by reducing stress and uncertainty. When adequate resources are available, someone may perceive less risk associated with making a non-traditional career choice and may persist in it despite facing challenges. Role model influences and support/encouragement were

conceptualized as proximal contextual influences that serve to facilitate career development.

It was hypothesized that among those with non-traditional majors there will be stronger associations between SES, role model influences, and support/encouragement with the outcome variables than among those with traditional majors. These stronger relationships were expected due to those entering non-traditional careers having to face more challenges and barriers and having more need to rely upon these supportive contextual factors.

Hypothesis 1: SES will be positively associated with major satisfaction and leadership aspirations.

Hypothesis 1a: The associations between SES and major satisfaction and leadership aspirations will be stronger among those students with non-traditional majors than among those with traditional majors.

Hypothesis 2: Support/encouragement from others will be positively associated with major satisfaction and leadership aspirations.

Hypothesis 2a: The associations between support/encouragement and major satisfaction and leadership aspirations will be stronger among those students with non-traditional majors than among those with traditional majors.

Hypothesis 3: Role model influence will be positively associated with major satisfaction and leadership aspirations.

Hypothesis 3a: The associations between role model influence and major satisfaction and leadership aspirations will be stronger among those students with non-traditional majors than among those with traditional majors.

An interesting question to consider was whether the associations differ for men and women. It can be hypothesized that men may aspire to leadership positions in non-traditional fields because it is more consistent with traditional gender roles. So, are role model influences and support/encouragement less important for men's leadership aspirations than they are for women's? This was an exploratory question that was addressed in the study.

CHAPTER III

METHOD

Participants

Participants were a mixture of undergraduate and graduate students at a large, public, Midwestern university. The students were asked to participate via an e-mail invitation. Students at this university need to log-in to their ULID (university log-in identification) Account Manager and select the option that states they wish to be placed on the electronic mailing list in order to receive the surveys. All of the students who chose to opt in for receiving the e-mail invitations were potential participants for this study. Any participant who did not list a major or career aspiration were discarded from later data analyses because it was necessary to classify students' majors and career aspirations as being traditional or non-traditional for their sex.

Faul and colleagues' (2009) G*Power 3 analysis tool was used a priori to determine the necessary sample size to achieve significant results with an effect size of $f^2 = .18$. A 9 predictor equation was used as a baseline. To obtain results with 80% power, as significant at the 5% level, the necessary sample size needed to be 98 participants. A sample size of 108 participants, also with a significance level of 5%, would yield 85% power for the study. A sample size of 122 participants, additionally with a significance of 5%, would yield 90% power for this study, which was the ultimate goal for this study. Five hundred and fifty-eight people logged into the survey, but some people had extensive missing data or closed their web browser after reading the consent screen and

thus provided no data. Four-hundred ninety-four participants were included in the final analyses. Exclusion of participants was due to participants either not answering the questions that were needed to create scores for variables included in the final analyses, or not providing information about their major or future career choice, which was required to determine the non-traditionality score. The mean age of the participants was 23.01 years ($SD = 6.2$). The sample consisted of 156 male participants (32%) and 338 female participants (68%). There were 65 freshmen (13%), 62 sophomores (13%), 123 juniors (25%), 134 seniors (27%), and 110 graduate students (22%) in the sample. In terms of ethnic identity the participants identified themselves as the following: 412 as White/Caucasian/European-American (83%), 24 as Black/African-American/African +descent (5%), 16 as Asian-American/of Asian descent (3%), 1 as Middle Eastern/of Middle East descent ($>1\%$), 11 as Biracial/Multiracial (2%), and 1 participant's data was reported as missing as he or she identified as international ($<1\%$). The top eleven majors represented in the sample were Accountancy BS/MPA, Business Administration, Communication Studies, Family and Consumer Science, History, Political Science, Psychology, Social Work, Sociology, Special Education, and Theatre.

Measures

Demographic Information

Participants were asked to report their major, year in school, age, sex, and race/ethnicity so that characteristics of the sample could be reported.

Major Satisfaction

Academic major satisfaction was measured using the 6-item Academic Major Satisfaction Scale (AMSS; Nauta, 2007). Some of the items asked include, "I often wish I

hadn't gotten into this major," and, "I feel good about the major I've selected."

Participants were asked to select, via a 5-point Likert-type scale, how well they agreed with each presented statement. The responses range from 1 = strongly disagree to 5 = strongly agree. Through her research, Nauta (2007) was able to determine that the AMSS scores of students who change their majors are significantly lower than those of students who stay in their majors during 1- and 2-year periods. Additionally, it was found that the scores in academic satisfaction were positively associated with both academic performance and career decision self-efficacy. In the two studies that were conducted for Nauta's (2007) research, the internal consistencies were reported as .94 and .90. The Cronbach's alpha in this study was .92.

Leadership Aspirations

Participants' aspirations to be leaders in their career fields were measured using the Career Aspirations Scale (CAS; Gray & O'Brien, 2007). This scale contains 10 items that are rated on a 5-point Likert-type scale ranging from not at all true of me (0) to very true of me (4). Some of the items are worded positively (e.g., "I hope to become a leader in my career field."), and some of the items were worded in a negative manner (e.g., "Attaining leadership status in my career is not that important to me."). The negative items were reverse-scored. The participants' responses to the 10 items were totaled, and the higher a score was, the greater the participant's leadership aspirations. The scores from a previous, slightly lengthier version of the CAS have been tested for internal reliability and were reported as .80 (Nauta, Epperson, & Kahn, 1998); in Gray and O'Brien's (2007) study, the shorter version of the CAS that will be used in this study had a Cronbach's alpha coefficient of .74; Cronbach's alpha for this study was .74.

Socioeconomic Status (SES)

Although SES has been assessed in many ways for research purposes, there is no single method that has been deemed optimal. It is possible to ask students about their parents' incomes, but many students may not know exactly how much their parents make, which could result in unreliable information. Therefore, for the purpose of this study, a method used by Metz, Fouad, and Ihle-Helledy (2009) to determine SES was implemented.

Participants indicated the level of education each of their parents/guardians have completed, ranging from "some high school," to "doctoral degree/professional degree." Upon obtaining the scores from the participants, a parental education score was determined by averaging the amount of education that the two parents had obtained or, in the case of a single-parent family, the single score from that parent was used.

Participants were also asked to report their parents'/guardians' occupations, which were coded against a thirteen-category occupation prestige coding scheme developed by Stevens and Cho (1985). Following the Stevens and Cho (1985) guidelines, those occupations, such as chief executive officers and professionals, which are considered to have the highest level of prestige, were coded in the highest category: Category 1. Occupations such as construction laborers and vehicle washers, which are considered to be in the lowest level of occupational prestige, were coded as Category 13. For the purposes of analyses, these were reverse-scored so that higher scores reflect greater occupational prestige. To create a parental occupational prestige score, the average of the two parent prestige variables was calculated or, if the participant only provided data for a single parent, that parent's prestige score was used.

The parent education and occupational prestige scores were transformed to z-scores and were averaged for each participant. These averaged scores provided a single score representing the participant's SES, where positive numbers indicated a higher level for SES in comparison to the sample and negative numbers indicated a lower level for SES in comparison to the sample.

Proximal Contextual Interpersonal Influences (Role Model Influence and Support/Encouragement)

Interpersonal influences on a student's career and academic decisions were measured by the Influence of Others on Academic and Career Decisions Scale (IOACDS; Nauta & Kokaly, 2001). There are two subscales that are used in this measure: Inspiration/Modeling and Support/Guidance. The participants were given statements to read and had to choose a response from a 5-point Likert-type scale ranging from strongly disagree (1) to strongly agree (5). Both positively worded and negatively worded items are on the scale, and negatively worded items are reversed scored. For this study, the overall Cronbach's alpha was .89.

The Inspiration/Modeling subscale is relevant in predicting career interests and choice. This subscale is composed of seven items, which are used as an attempt to measure the amount of inspiration and role model influence that students think they are getting from others who are influential to them when making career decisions. The scale consists of four positively worded items (e.g., "There is someone I am trying to be like in my academic or career pursuits.") and three negatively worded items (e.g., "There is no one I am trying to be like in my academic career or pursuits."). This subscale has an

internal reliability of .87 (Nauta & Kokaly, 2001); Cronbach's alpha for this study was .89.

The Support/Guidance subscale was used to measure the amount of support and guidance that a student thinks he or she is receiving from other people when it comes to making an academic or career choices. There are eight items on this subscale, which include seven positively worded items (e.g., "There is someone I can count on to be there if I need support when I make academic and career choices.") and one negatively worded item (e.g., "There is no one who shows me how to get where I am going with my education or career."). This subscale has an internal reliability of .85; Cronbach's alpha for this study was .88.

Nontraditionality of College Major and Career Aspirations

Participants were asked to record their current major as well as their intended career. To code the nontraditionality of students' majors, data from the university's registrar's office was used to determine the percent of students in that major who are of the opposite sex than the participant. To assess the participants' career aspirations, they were asked the question, "What job or career do you think you are likely to have?" This question has been tested for validity by numerous researchers, including Watson, Quatman, and Edler (2002), who found that its responses were correlated in expected directions with a measure of achievement (i.e., those with the highest-status career aspirations had higher scores on the measure of academic achievement). Every year, the U.S. Bureau of Labor Statistics publishes a report indicating how many members of each sex represent a specific career. The data for the current year were accessed, and students' career aspirations were coded in terms of the percent of employees in that career who are

of the opposite sex; this coding was an index of the degree of non-traditionality of the student's career aspiration. Because students' listed career aspirations did not always correspond with the Bureau of Labor Statistics job titles, a second rater (a graduate student also in the Clinical-Counseling program) also categorized participants' career aspirations into the Bureau of Labor Statistics job titles. Inter-rater reliability was then measured by determining the percentage of answers that were the same. While Cohen's kappa could be used to control for agreement that occurs simply by chance, with such a large number of career categories, the probability of chance agreement is trivial, making simple percentage agreement the more straight-forward method of assessing inter-rater reliability (McHugh, 2012). For this study, the interrater reliability was 76%. According to McHugh (2012), a Cohen kappa of that value suggests there is a moderate level of agreement between the raters. Since her research suggested that determining the percent agreement would suffice for a sample of this size, it is safe to say that the results would still be moderate. Most of the discrepancies found were due to the wording for some of category titles from the Bureau for Labor Statistics. For example, under education, there are of the options of "other teachers and instructors" or "other education, training, and library workers," which does not seem to contain much ambiguity between the two. It could be assumed that had these two categories been lumped into one category, a higher level of inter-rater reliability would have been present. Discrepancies were resolved via consensus.

For some analyses, it was useful to have a single score reflecting the non-traditionality of a student's field. For these analyses, the nontraditionality scores for major and career aspiration were averaged. The scores were coded continuously, which

meant the scores were assessed on an overall scale from zero to 100% in regards to nontraditionality of major and career aspirations. Even though the Bureau of Labor Statistics considers fields to be nontraditional for a person when 75% or more of the employees are not of the person's sex, this percent is an arbitrary cut-point and is not based on empirical data suggesting that this particular percentage is meaningfully different from slightly higher or lower percentages.

Procedure

Before the data collection could begin, the study was reviewed by the university's Institutional Review Board. Once this study was approved, the students who had consented to receive e-mails regarding research opportunities were sent an e-mail asking for their participation in the study. If a student chose to participate, he or she clicked on a link for the survey. Before being able to access the survey, the student needed to read information on an informed consent screen. Once the student accepted the agreement on the survey, he or she continued to complete the measures as described above.

CHAPTER IV

RESULTS

Table 1 shows the means, standard deviations, and correlations among all the measures' scores for the sample as a whole. The scores included in the table are SES scores, AMSS scores, CAS scores, IOACDS support/guidance scores, IOACDS inspiration/modeling scores, and the non-traditionality of combined major and career scores.

Hypothesis 1, which stated that SES will be positively associated with major satisfaction and leadership aspirations was tested by examining the correlations between the scores on the SES measure and (a) AMSS scores and (b) CAS scores. The correlation of SES and AMSS scores was not significant, $r(475) = .01, p = .846$. Similarly, the correlation of SES and CAS scores ($M = 3.64, SD = .63, N = 491$) was not significant, $r(489) = -.02, p = .625$. Thus, hypothesis 1 was not supported.

To test hypothesis 1a, which posited a moderation effect such that the relations among SES and (a) major satisfaction and (b) leadership aspirations would be stronger among students with non-traditional majors than among those with traditional majors, two regression analyses were conducted. In both, SES scores, the non-traditionality of major/career aspiration score, and the cross-product of the two were entered as predictors. In one regression analysis, AMSS scores were the criterion, and in the other regression analysis CAS scores were the criterion. A significant interaction term would suggest moderation is present. The two predictors only accounted for a small portion of the

Table 1

Means, Standard Deviations, and Correlations among the Measures

Measure	1	2	3	4	5	6
1. Socioeconomic Status						
2. IOACDS – I/M	.08					
3. IOACDS – S/G	.16*	.38*				
4. Career Aspirations Scale	-.02	.25*	.22*			
5. Academic Major Satisfaction Scale	.01	.32*	.32*	.20*		
6. Career and Major Nontraditionality Score	-.05	-.07	-.03	.02	-.06	
<i>M</i>	-.01	3.58	4.11	3.64	4.31	39.43
<i>SD</i>	.77	.90	.72	.63	.79	19.36
<i>N</i>	491	490	490	491	477	490

Note. * $p < .01$; IOACDS = Influence of Others on Academic and Career Decisions Scale; I/M = inspiration/modeling; S/G = support/guidance.

variance in AMSS scores ($R^2 = .01$), which was not significant, $F(3, 470) = 1.09, p = .353$. Both SES ($\beta = .08, p = .374$) and the nontraditionality of participants' major ($\beta = -.94, p = .126$) did not demonstrate significant effects on AMSS scores, and the cross-product was not significant. Similarly, the two predictors only counted for a small portion of the variance in CAS scores ($R^2 = .01$), which was not significant, $F(3, 484) = .92, p = .43$. Both SES ($\beta = -.14, p = .11$) and the nontraditionality of participants' major ($\beta = .01,$

$p = .82$) did not demonstrate significant effects on CAS scores, and again the cross-product was not significant. Thus, hypothesis 1a was not supported. See Tables 2 and 3 for unstandardized slopes, standard errors, and standardized slopes for each predictor in each analysis.

Table 2

Results of Linear Regression Analysis Testing the Moderating Effect of Nontraditionality on the Relationship between Socioeconomic Status and Major Satisfaction

Predictor	<i>B</i>	<i>SE B</i>	β
Socioeconomic Status (SES)	.08	.09	.08
Nontraditionality of Students' Fields	-.00	.00	-.07
Cross Product Between SES and Nontraditionality	-.00	.00	-.08

Table 3

Results of Linear Regression Analysis Testing the Moderating Effect of Nontraditionality on the Relationship between Socioeconomic Status and Leadership Aspirations

Predictor	<i>B</i>	<i>SE B</i>	β
Socioeconomic Status (SES)	-.12	.07	-.14
Nontraditionality of Students' Fields	.00	.00	-.01
Cross Product Between SES and Nontraditionality	.00	.00	.14

Hypotheses 2 and 3 were tested together. Hypothesis 2 stated that support/encouragement from others will be positively associated with major satisfaction and leadership aspirations, and hypothesis 3 stated that role model influence will be positively associated with major satisfaction and leadership aspirations. To test these

hypotheses, two regression analyses were used. One analysis had CAS scores as the criterion and the other had AMSS scores as the criterion. In both analyses, nontraditionality scores, inspiration/modeling scores, and support/guidance scores were included, and their cross-products were also predictors. These predictors were examined as a set since they are proximal contextual influence variables, that is, they are current environmental influences.

The predictors of IOACDS support/guidance, IOACDS inspiration/modeling, and nontraditionality of participants' major accounted for a small portion of the variance for CAS scores ($R^2 = .09$), which was highly significant, $F(5, 488) = 9.05, p = .000$. Interestingly each predictor demonstrated differing levels of significance on CAS scores: IOACDS inspiration/modeling ($\beta = .25, p = .007$) had a significant effect, IOACDS support/guidance ($\beta = .18, p = .061$) had a moderately significant effect, and nontraditionality of participants' major ($\beta = .27, p = .307$) did not demonstrate a significant effect. The same predictors accounted for 15% of the variance for AMSS scores, which was highly significant, $F(5, 473) = 16.82, p = .000$. Both IOACDS inspiration/modeling ($\beta = .25, p = .006$) and IOACDS support/guidance ($\beta = .25, p = .008$) demonstrated significant effects on AMSS scores. The nontraditionality of participants' majors ($\beta = .07, p = .79$) did not demonstrate any significance. See Tables 4 and 5 for unstandardized slopes, standard errors, and standardized slopes for each predictor in each analysis.

To test hypothesis 2a, which posits a moderation effect such that the relations among IOACDS support/guidance scores and (a) major satisfaction and (b) leadership aspirations will be stronger among students with non-traditional majors than among those

with traditional majors, the significance of the cross-product of the nontraditionality and the support/guidance scores was examined. If the interaction term had been significant, it would have suggested moderation is present. For AMSS scores, the interaction between IOACDS support/guidance and nontraditionality did not demonstrate significant effects ($\beta = -.09, p = .733$), and similar results were found for CAS scores with the interaction term ($\beta = -.14, p = .615$). Accordingly, hypothesis 2a was not supported.

Table 4

Results of Linear Regression Analysis Testing the Moderating Effect of Nontraditionality on the Relationships between Support/Encouragement and Inspiration/Modeling with Career Aspirations

Predictor	<i>B</i>	<i>SE B</i>	<i>B</i>
IOACDS Support/Guidance	.16	.09	.18
IOACDS Inspiration/Modeling	.18*	.07	.25
Nontraditionality of Students' Fields	.01	.00	.27
Cross Product Between Support/Guidance and Nontraditionality	-.00	.00	-.14
Cross Product of Inspiration/Modeling and Nontraditionality	-.00	.00	-.11

Note. IOACDS stands for Influence of Others on Academic and Career Decisions Scale.

* $p < .05$.

Table 5

Results of Linear Regression Analysis Testing the Moderating Effect of Nontraditionality on the Relationships between Support/Encouragement and Inspiration/Modeling with Major Satisfaction

Predictor	<i>B</i>	<i>SE B</i>	<i>B</i>
IOACDS Support/Guidance	.27*	.10	.25
IOACDS Inspiration/Modeling	.22*	.08	.25

Nontraditionality of Students' Fields	.00	.01	.07
Cross Product Between Support/Guidance and Nontraditionality	-.00	.00	-.09
Cross Product of Inspiration/Modeling and Nontraditionality	.00	.00	-.03

Note. IOACDS stands for Influence of Others on Academic and Career Decisions Scale.

* $p < .05$.

To test hypothesis 3a, which posited a moderation effect such that the relations among IOACDS inspiration/modeling scores and (a) major satisfaction and (b) leadership aspirations would be stronger among students with non-traditional majors than among those with traditional majors, the significance of the cross-product of the nontraditionality scores and the inspiration/modeling scores was examined. For AMSS scores, the interaction between IOACDS inspiration/modeling and nontraditionality of majors was not significant ($\beta = -.03$, $p = .871$), and a similar result was found with CAS scores and the interaction term ($\beta = -.11$, $p = .564$).

To answer the exploratory question about whether the associations between role model influences and support/encouragement are less important for men's leadership aspirations than they are for women's, two additional regression analyses were conducted among only those students who have fairly nontraditional majors. It would have been ideal to conduct this analysis with students whose nontraditionality scores were 75 or higher (consistent with the Bureau of Labor Statistics guidelines for nontraditional careers), but only 18 students in the sample met this criterion. As a compromise, this

analysis included students who were in the numerical minority (i.e., had nontraditionality scores greater than 50) in their fields.

Among those 145 students, the dummy coded variable reflecting students' sex, IOACDS inspiration/modeling scores or IOACDS support/guidance scores, and the cross-products were entered as predictors, and CAS scores were the criterion.

Collectively, the predictors accounted for a small portion of the variance in leadership aspirations ($R^2 = .07$), which was marginally significant $F(5, 140) = 2.15, p = .063$.

Interestingly, gender ($\beta = .32, p = .459$), IOACDS inspiration/modeling ($\beta = .39, p = .282$), and IOACDS support/guidance ($\beta = .04, p = .906$) did not have significant unique effects on CAS scores with this smaller sample. Because the cross-products were not significant, no evidence for moderation was detected. See Table 6 for unstandardized slopes, standard errors, and standardized slopes for each predictor in the analysis.

Table 6

Linear Regression Analysis Testing the Moderating Effect of Gender on the Relationships of Support/Encouragement and Inspiration/Modeling with Career Aspirations

Predictor	<i>B</i>	<i>SE B</i>	<i>B</i>
Gender	.46	.61	.32
IOACDS Support/Guidance	.03	.28	.04
IOACDS Inspiration/Modeling	.28	.26	.39
Cross Product Between Gender and Inspiration/Modeling	-.08	.15	-.25
Cross Product of Gender and Support/Guidance	.01	.16	.04

Note. Gender was coded such that 1 = male and 2 = female.

Because of the unexpected null findings regarding SES and its relations with other variables, some additional exploratory analyses were conducted to assess whether any results would be significantly different by separating the data collected from the graduate students and comparing it to the data collected from the undergraduate students.

First, the correlations among the study variables were calculated separately for the two groups. Two interesting differences emerged. For undergraduate students, SES was significantly related to support/guidance, $r(380) = .17, p = .001$, but this correlation was not significant among the graduate students, $r(110) = .12, p = .20$. Similarly, among the undergraduate sample, the correlation between SES and inspiration/modeling was significant, $r(380) = .10, p = .05$, whereas it was not significant among the graduate student sample, $r(110) = -.02, p = .85$. Other correlations among the study variables, including those between SES and both leadership aspirations and nontraditionality, did not appear to differ appreciably for undergraduate and graduate students.

Because of the apparent differences in the relations between SES and two of the study variables for undergraduate and graduate students, the regression analyses involving the SES variable were repeated separately for undergraduate and graduate students. As was the case with the combined sample, the set of predictors was not significant; thus, although there do appear to be some differences involving SES and its associations with interpersonal supports for undergraduate and graduate students, it does not appear that the differences are responsible for the null findings involving SES in this study's regression analyses.

CHAPTER V

DISCUSSION

The purpose of this study was to examine how SES, role model influences, and support/encouragement are related to experiences that college students have, primarily in terms of satisfaction with their majors and their plans to become leaders in their fields. Major satisfaction is strongly related to whether students continue in their field over a longer period of time (Nauta, 2007) and therefore serves as a reasonable proxy variable for persistence in the field. Leadership aspirations were of interest because of the need to increase the number of visible gender minorities in career fields. Essentially, if gender minorities were to become more prominent in occupations that stand out, especially those involving leadership qualities, perceptions of occupations being limited to members of only one sex may be reduced (Gottfredson, 2005). Based on Social Cognitive Career Theory (Lent et al., 1994), it was hypothesized that SES, role model influence, and support/encouragement would all be related to students' major satisfaction and plans to become leaders. Prior research (Dasgupta & Asgari, 2004; Stirling, 2013) had linked role model influence and support to students' leadership aspirations, but their association with major satisfaction was unknown. In addition, the association of SES with these outcomes was unclear. Examining these relationships was one of the unique contributions of the current study. In addition, because those who enter non-traditional careers may have to face more barriers and obstacles than those in traditional careers, it was expected that there would be a greater reliance on contextual factors among those students, but this

assumption had not been tested previously. Testing this moderation effect was another contribution of the current research.

Contrary to expectation, SES was not associated with major satisfaction and leadership aspirations. It would be premature to conclude that SES does not play a role in students' major satisfaction and leadership aspirations, because there is somewhat limited diversity among the participants with respect to SES. Those who are most economically challenged may not have been able to attend college and therefore would not have been part of the sample. If the finding is not the result of limited variability, the null relationship between SES and the outcome variables may be viewed as encouraging. One possible interpretation is that once students reach college, outside factors, such as financial aid, serve to ameliorate any challenges associated with a lower economic background. It may be that low SES serves as a barrier to entry into some fields, including those requiring college degrees, but once a student overcomes that barrier it does not continue to play a role in terms of his or her satisfaction and aspirations to become a leader.

Although SES was not associated with major satisfaction or leadership aspirations, it did have a significant association with perceived support/guidance. Those with higher SES indicators reported perceiving more support and guidance when making career decisions than did those with lower SES indicators. One hypothesis for this difference could be that since students from lower SES backgrounds may not have the resources to seek out a career path that is highly different from that of their same-sex parent (Burwood, 1992), parents themselves may end up seeing the pursuit of a nontraditional career as something that could come with a lot of unnecessary risk. While

parents want their children to be successful, most parents may be more inclined to support a career choice that they know their children have the means to obtain, as opposed to what they think may be a lofty dream. Additionally, if a lower SES parent had not had experience with college, they may not be as willing, or able, to offer as much support or guidance due to lack of knowledge of that culture. Future research into the how SES relates to support could help explain this discrepancy.

The associations between SES and major satisfaction and leadership aspirations did not appear to vary depending on the nontraditionality of students' fields. Because there was limited variability both in terms of SES and nontraditionality in the current sample, this finding may not generalize to more diverse student groups. If the lack of moderation effect stands with more diverse samples, it would suggest that SES need not necessarily be viewed as a risk factor for "leakage" of gender minorities from the pipeline leading toward establishment in nontraditional careers.

There was an interesting difference involving the association of SES with support/guidance and inspiration/modeling when the sample was separated into undergraduate and graduate subsamples. Whereas SES was significantly associated with the two interpersonal supports for the undergraduates, it was unrelated to all study variables for the graduate students. Perhaps this is a function of greater diversity of SES among the undergraduate sample, or it could be that graduate programs are sufficiently small that students feel adequately supported and inspired by role models regardless of SES. Exploring the possible reasons for the different associations between SES and the support variables for undergraduate and graduate students would be an interesting area for future study.

As was speculated, support/encouragement from others was positively associated with major satisfaction and displayed marginal significance in relation to leadership aspirations. Whether it be from important people in someone's personal life (Hawley, 1972), mediating loneliness (Astin & Leland, 1991), or helping to achieve a work-life balance (Nobbe & Manning, 1997), support and guidance are found to be important factors in determining career-development outcomes. Social Cognitive Career Theory's (Lent et al., 1994) conceptualization of interpersonal support as an important contextual influence in career decision-making seems well-founded.

Also consistent with Social Cognitive Career Theory's prediction that interpersonal influences can serve as supportive contextual factors that influence people's career development was the finding that inspiration/modeling from role models was positively associated with major satisfaction and leadership aspirations. Career role models may have helped the students surveyed by helping them figure out what careers might be possible for them through varying types of experiences (Farmer, 1997). They may also help to illustrate ways in which work and family balance may be achieved (Nauta et al., 1998). In regards to leadership aspirations, role models may demonstrate high levels of achievement that are inspiring to students, who want to emulate them.

Contrary to expectation, the strength of the positive associations between support/guidance and inspiration/modeling from role models and the outcome variables of major satisfaction and leadership aspirations did not appear to vary depending on the nontraditionality of students' fields. An optimistic interpretation is that men and women in nontraditional fields may be receiving more support from their peers and family members and finding greater access to career role models in comparison to participants

from earlier studies such that their experiences are comparable to those of students in more traditional fields. A more likely explanation is that this finding needs to be viewed in light of the current sample's characteristics. Very few students in truly nontraditional fields were part of the sample, so it would be unwise to conclude that those in nontraditional fields do not rely more heavily on support and role model influences than do those in more traditional majors. Future research with more diversity in terms of nontraditionality will be needed to answer this question more definitively. If the finding that nontraditionality of students' fields does not moderate the associations between interpersonal influences and career outcomes stands with more diverse samples, then it would suggest we will need to consider other potential routes for intervention when attempting to increase the number of gender minorities who persist in and aspire to leadership aspirations in their fields.

It is also possible that the social and economic contexts of the present day could have had an effect on the findings of this study. For example, there is a scarcity of jobs for recent graduates, and this could scarcity could cause students to restrict their career aspirations to what they believe is an attainable option as opposed to what they believe is ideal. When entering the workforce, some students have begun to have the mindset that as long as they get an introductory job, they will then work their way up to their ideal job. In this sense, even if they have a significant amount of support and role model influence, it may not transfer into a high amount of leadership aspirations due to believing that positions of leadership are unattainable directly out of college.

The exploratory question in this study addressed the possibility that there would be gender differences in the associations that role model influence and

support/encouragement have with major satisfaction and leadership aspirations for students in nontraditional fields. This question was examined due to the notion that men may seek out leadership positions in non-traditional fields because those positions contain more consistency with traditional gender roles as opposed to positions that do not involve leadership. When conducting the analysis for this question, a discrete categorization was used to assess nontraditionality because I was interested in studying if there were any specific gender differences in the associations between the predictors and career aspirations for those in nontraditional fields. The data from this study did not support the idea of gender moderation effects, but unfortunately, once again, the results are inconclusive due to the small number of students who were truly in nontraditional fields. The conceptualization of nontraditionality had to be broadened for this analysis and included students who were even slightly in the numerical minority in their fields. It may be that there are gender differences in the associations between support/encouragement and role model influence with leadership aspirations among those who are truly and noticeably minorities in their fields.

Implications

Because implications from this study need to be interpreted very cautiously in light of the small number of students in the sample who were in truly nontraditional fields, it is important not to view the implications as prescriptive. If, however, the findings from this study are replicated with samples that include more students who are in nontraditional fields, some important conclusions can be drawn. First, the results indicate that there are not significant differences in the relationships that SES, role model influence, and support have with major satisfaction and leadership aspirations for people

in more traditional and less traditional fields. This finding is inconsistent with previous speculation that those in nontraditional fields may rely more heavily on role models and support due to the barriers they experience when entering their field of choice (Betz & Fitzgerald, 1987; Evans & Frank, 2003). The current study's findings raise questions about whether SES, role model influence, and support/encouragement help account for leakage from the nontraditional career pipeline. While these factors are important overall, and can be addressed in a vocational counseling setting, they may not need to be differentially emphasized if the goal is to increase representation of gender minorities in particular career fields.

These findings do not necessarily imply that SES, role model influence, and support/guidance are not important at all in addressing the career needs of people in nontraditional fields. Although the strength of the associations between these factors and the career outcomes did not vary depending on the nontraditionality of students' fields, support/guidance and inspiration/modeling did have positive associations with major satisfaction and leadership aspirations. Therefore, these forms of influence might be logical targets for intervention with *any* students who are dissatisfied with their majors and who are at risk for leaving their fields (unless the choice to do so is based on the discovery that another field is preferred on the basis of the student's interests, values, or abilities). Because of the small numbers of gender minorities who initially enter nontraditional fields, ensuring access to role models and adequate support may still be essential in order to reduce further loss from the nontraditional career pipeline. A counselor might help such students connect with persons who can serve as role models and identify areas in which the student needs additional support. For example, the

individual may have always had the drive to enter a particular nontraditional field, but may have only looked to the role model to assess how he or she worked through challenges to achieve their goal of getting into a field (Bucher & Stelling, 1977). The student might need encouragement to seek inspiration from other aspects of the model's career experiences. As for support, some people may be seeking support for issues such as harassment and discrimination (Norton, 2002), or issues with blending work and family responsibilities (Phillips, 2011). Each issue requires different types of support from personal acquaintances but also people in the workplace on different levels, and a counselor might help the client explore the possibility of seeking additional support as needed.

Limitations and Recommendations for Future Research

As previously discussed, the most salient limitation of this study has to do with the nature of the sample. Although the overall number of participants was fairly large and exceeded the size needed to detect significance in the main analyses, the vast majority of the participants were not in truly nontraditional fields as determined by their majors and career aspirations. The restricted range in nontraditionality may have accounted for many of the study's unexpected null findings. Future research might address this limitation by attempting to recruit participants from nontraditional majors more intentionally rather than drawing from a general student population. For example, researchers could advertise the study as attempting to understand the experiences of people who are gender minorities in their fields, which might increase the response rate of such individuals.

Additionally, the participants in this study were from one university in the Midwest. Sampling from a single institution increases that risk that characteristics of the

institution affect the findings. For example, the university from which the participants were drawn has nationally known programs in nursing and education, and therefore probably attracts students with interests in those fields. Any particular supports that the university provides to students in terms of increasing support, access to role models, or financial aid for students in need, cannot be assumed to be present at all institutions. Therefore, the results may not generalize to nationwide samples. Including numerous universities in future studies could create a more diverse sample to analyze which could help generalize the findings. Examining the differences between graduate and undergraduate students could also bring to light the differences in experiences and help make the findings more generalizable across different stages of education.

A third, related limitation is that the sample was predominantly female and predominately Caucasian. Having this break down of participants does not create a very diverse sample and does not allow the results to be generalizable across both sexes and different ethnicities. Having this kind of population also significantly limits the information that is collected from men who enter nontraditional careers, as predominately female-oriented occupations still have qualities that make them less appealing to men. It would be beneficial to identify what exactly is helping men enter and stay in nontraditional fields. A way to address this problem in future research, again, would be to specifically seek out people with nontraditional majors to participate in a study examining predictors of satisfaction and aspirations.

Another limitation was that the data was only collected at one time. If the data collection was done over a longer period in time, the results could have been different, especially in areas such as major satisfaction and leadership aspirations. For example,

students who identified as freshmen may have chosen a field of study and seem satisfied in it, but that satisfaction may change as they further their education, which could result in a change of major. This student's major satisfaction would fluctuate depending upon their experiences and any decisions they make to change their field. Furthermore, a student's leadership aspirations may change over the course of their college career as they get more in-depth into their studies and have more experiences with campus life. Assessing role model influences and support/guidance and linking them with later major satisfaction and leadership aspirations using a longitudinal design would be a recommended approach.

One last limitation for this study is how SES and the nontraditionality of the participants' majors and career aspirations were identified. Although SES was coded utilizing the method developed by Stevens and Cho (1985), there are some problems inherent with this method. Because some participants had at least one parent who was deceased, retired, a homemaker, or self-employed (which are not codable in the Stevens and Cho system), important elements were omitted from determining some participants' SES. Furthermore, because nontraditionality of students' fields was coded based upon the percent of opposite-sex members in participants' majors and identified future careers, some error could have been introduced as a result of coding. This limitation was minimized by having two raters code the students' intended careers with respect to the Bureau of Labor Statistics job titles (which then allowed the researcher to document the percent of opposite-sex employees in that field), and even though the level of agreement was fairly high, it is possible that both coders may have erroneously categorized some

careers if the participants' written aspiration happened to sound like a job title in the Bureau of Labor Statistics categories but was really of a different nature.

Because the variables assessed in this study do not seem to account for the differential rates of leaving fields depending on the nontraditionality of someone's field, future research will also need to address other potential predictors of major satisfaction and leadership aspirations. Such variables could include harassment and discrimination, individuals' self-concepts, peer influence, or perceived efficacy of skills, which have been identified as possible barriers to women's and men's staying in nontraditional career fields. Additionally, future research could also determine if sexual orientation is a factor that determines if men and women enter into and persist in nontraditional careers due to not potentially conforming to gender norms.

Conclusions

Gender stratification continues to be an influential aspect of many areas of the workforce. Despite different interventions, numerous barriers still exist that prohibit men and women from pursuing career that may not conform to gender norms. Previous research has indicated that influences from role models and support from others is important for those who are pursuing nontraditional careers. An important finding from the current study is that this still appears to be true and has an influence on students' leadership aspirations as well as major satisfaction. These findings, however, may not be generalizable to everyone in nontraditional fields due to the limitations of the sample. Additional research would need to be conducted before the results could be generalized to a larger population. Socioeconomic status appears to be a variable that needs to be studied further to determine how influential it is when students are making decisions

regarding their field of study and career goals. Further research in this field would continue to be beneficial to assess exactly what factors contribute to men and women entering nontraditional fields.

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