1-1-2011

Perceptions of Masculinity and Career Specific Gender Stereotypes

Brian A. Golden

Follow this and additional works at: http://commons.emich.edu/theses

Perceptions of Masculinity and Career Specific Gender Stereotypes

by

Brian A. Golden

Thesis

Submitted to the Department of Communication, Media, and Theater Arts

Eastern Michigan University

in partial fulfillment of the requirements

for degree of

MASTER OF ARTS

In

Organizational Communication

Thesis Committee:

Jeannette Kindred, PhD, Chair

Sally McCracken, PhD

Tsai-Shan Shen, PhD

July 26, 2011

Ypsilanti, Michigan

Abstract

Career gender bias is the tendency for men or women to resist work in careers that tend to be dominated by individuals of a specific gender (nursing, public relations, elementary education, child-care, police, fire, manufacturing). This study posits that current university students exhibit career gender bias and classify certain Bureau of Labor Statistics job classifications as male, female or unisex occupations. Furthermore, with use of the Bem Sex-Role Inventory (Bem, 1974) scale, this study attempted to understand if masculinity, femininity, or androgyny gender identity influences college students' perceptions of career gender stereotypes and ultimately their view about the growing or declining Bureau of Labor Statistics listed professions. Participants in this study designated growing and declining occupations within male and female subgroups with several careers being viewed as unisex by students scoring high in femininity. Furthermore, data from this study indicate that female participants continue to feel open to male, female, and unisex careers; however, male participants appear to be uncomfortable pursuing unisex or female dominated careers.

Acknowledgements

It seems a daunting task to pursue advanced education and begin a Master's program. The role you once had as a student digesting and regurgitating the thoughts and pontifications of others quickly becomes a distant memory. It is now time for the student to begin thinking as a scholar. Begin to ask questions. Begin to solve problems. Begin creating and conducting your own research. To be successful we must be adequately equipped with needed tools and skills.

As a research apprentice I owe my beginnings as a scholar to the educators who have so greatly influenced my progression as an incoming student to a graduate of the Master of Arts in Communication program at Eastern Michigan University. Dr. Michael Tew, Dr. Dennis Patrick, and Raymond Quiel are examples of outstanding educators as well as outstanding individuals. Without your guidance, patience, and understanding, I would not have completed my program of study here at Eastern Michigan University. I appreciate your generosity, and thank you for your constant availability and unmatched professionalism.

I would like to acknowledge the efforts of Dr. Sally McCracken and Dr. Tsai-Shan Shen. You showed me respect and unwavering confidence in my ability to complete my program of study and embark on the difficult task of researching, writing, and completing my thesis. Having two erudite and learned individuals cheering me on was a great inspiration. Thank you, for your time and commitment to my success as a student and future scholar.

As I began my program I was fortunate to be assigned Dr. Jeannette Kindred as my advisor. This would become a wonderful opportunity to work with an intelligent and driven scholar. Dr. Kindred would sense my apprehension as a returning non-traditional student by giving me

continued reassurance in my ability to succeed. More importantly, Dr. Kindred asked more of me than I thought was possible. At times she threw me into the turbulent waters of academia, giving me the confidence to swim upstream into the raging currents of my uncertainty. I thank you for your belief in my intellect and ability to succeed. Without Dr. Kindred's constant support and acting as my educational champion; I am convinced this research project would not have been completed. Thank you, Dr. Kindred, for giving your time, energy, and support throughout my educational career and, most important, acting as the Chairperson of my thesis committee.

Dedication

Life continues along an unknown path with twists and turns unexpected. Champion the journey.

Focus on what lies ahead rather than what has passed. I dedicate this work and the completion of

my thesis to my son Grant.

Table of Contents

Chapter 1

Introduction

As students enroll in college with great hope and the fervent belief that success will be attainable upon graduation, many of our incoming freshpersons will be unaware of the role gender stereotypes play in their selection of future career choices. Moreover, as student retention continues to be a problem for academic administration professionals attempting to increase the graduation rates of incoming college students, administrators may be unaware of how career gender stereotypes influence college students' perceptions of their future careers choices in the United States. It is important to understand if traditional stereotyped gendered career bias is contributing to the continued shrinking of the male college student population. As the climate and demographics change on college campuses throughout the United States, a better understanding of the role gender stereotypes play in career and curriculum selection must be further understood. Colleges and universities continue to search for the reason more males are not applying for college, and why the gender gap is increasing for African-American and Hispanic men who appear to be reluctant to enroll in college (Behrend, 2009).

Women on college campuses throughout the United States continue to enroll and graduate at higher rates than males on college campuses (Behrend, 2009). Initially the success of our female students appears to be a means for celebration; however, males, especially minority men, are less likely to enroll in college and graduate, therefore denying a growing number of males in the United States the opportunity to earn a good living, stay employed, marry, and be productive members of society (Kleinfeld, 2009).

Historically men and women have had different expectations; women's roles were defined as care-givers, and they were expected to perform domestic work while men were defined by their

strength and ability to complete physical labor (Ayenibiowo, 2010). As the required technical skills and communication abilities of college graduates entering the workforce continue to change and develop, it is crucial to understand whether current college students define themselves in traditional male and female stereotypes and whether career gender bias plays a role in our college students' perceptions of their place and fit into the expectations of today's work environment. Students entering the workforce upon graduation will be forced to adapt to a workplace environment where traditional male and female roles in the workplace continue to change and be redefined.

According to the 2010 Bureau of Labor Statistics, the civilian labor force is experiencing rapid changes. The Bureau has projected areas of growing employment and areas of declining of employment. Permanent job losses will continue due to overseas outsourcing along with continued losses of primarily entry level manufacturing jobs. Medical occupations are projected as one of the fastest growing employment segments in the United States over the next two decades; physician assistants, health/medical careers, science careers, and environmental careers are projected as occupations that are growing at a rapid pace in the United States and this trend is expected to continue over the next two decades (Bureau of Labor Statistics, 2010). As manufacturing jobs continue to be lost, male workers will have to look beyond gender career bias to find careers they find appealing despite traditional societal gender male and female labels.

With this burgeoning growth of careers such as medical careers, this study will investigate whether career gender stereotypes are influencing career choices of college students with the hopes of having heuristic value for future researchers and college admissions counselors and advisers who are on the front lines in helping students begin their college careers. Current employment trends indicate that careers in the medical field like that of physician assistant are

becoming female gender majority professions as over 60 percent of new physician assistants in training in the United States are female (Bureau of Labor Statistics, 2010). The goal of the current study is an attempt to understand whether masculinity influences male and female career gender specific stereotypes and whether this correlates with their views and perceptions of male and female gendered careers. University admissions advisors will need to determine if current university students exhibit career gender bias and classify certain Bureau of Labor Statistics job as male, female or unisex occupations. Furthermore, the current study will survey today's present generation of college students about masculinity, femininity, and androgyny and determine if gender identity influences perceptions of their future career choices.

Review of Literature

This literature review has drawn information from a diverse number of scholarly publications. Labor, gender, psychology, feminist, career, and management journals provided detailed information for this literature review. Communication literature about the male gender and their career choices is an underserved area in communication research (Simpson, 2004). There is an enormous amount of data on communication and women in the workplace from a feminist perspective; however, very little information is available that focuses on the male population and the communication messages they are receiving. Theoretical frameworks exist within masculinity studies; however, they are inconsistent and reflect the relatively new status of this area of research (Simpson, 2004). This literature review will now take a closer look at previous research which studied the role gender stereotypes and bias play in career choices.

Loss of Traditional Male Jobs

 As the United States moves towards a more technical and service based economy, the number of perceived traditional male jobs versus female traditional jobs will continue to decline (Jencks,

2004; Gittleman & Howell, 1995).   The current United States job market has been experiencing dramatic changes in the structure and quality of jobs since the 1980s (Gittleman & Howell, 1995). High paying manufacturing jobs that required relative minimal educational requirements are now being replaced by lower paying jobs or jobs that require advanced technical skills obtained through higher education (Jencks, 2004). This change in quality of jobs has created an environment of "good" jobs versus "bad" jobs. Good jobs are jobs that are considered occupations that offer greater job security, income, and health benefits, while bad jobs are considered lower-tiered occupations that offer little upward mobility, little personal autonomy, and lower economic status (Jencks, 2004; Gittleman & Howell, 1995).

Job definitions and classifications between male and female jobs continue to blur, and as this blurring of jobs continues, many of these occupations in the United States are increasingly becoming lower quality jobs (Kouzmin, Korac-Kakabadse &Korac-Kakabadse 1999). Kouzmin et al. (1999) posited in their research that traditionally pink-collar jobs were primarily viewed as office and baking careers; however, these occupations are now being lost to technological advancements, and pink-collar jobs are now becoming occupations in nursing, the healthcare industry, and other service-based occupations.

Much research exists about the age, race, gender, and educational levels of the winners and losers of jobs over the last two decades (Gittleman & Howell, 1995). As jobs in America continue to be outsourced, new jobs are being created in India and elsewhere throughout the world in a vast array of service sectors such as stock market research for financial firms, medical transcription services, legal online database research, and data analysis for consulting firms, as well as traditional call centers (Barden & Kroll, 2003). Furthermore, the outsourcing of parts within the supply chain of manufacturing has resulted in a shift of demand for traditional blue-

collar jobs to white-collar jobs, and from labor intense occupations to service-based occupations

(Barden & Kroll, 2003). Future areas of research should be directed towards the male population

and understanding whether career gender stereotypes are influencing future career choices.

Moreover, research must be directed towards understanding how attitudinal changes towards

women entering the workforce have affected male and female employee and their views of work

place opportunities.

Career Choices and Gender

Affirmative action and equal employment law emerged at the height of the civil rights

movement to address past discriminatory practices in the United States with the hopes of

preventing future discrimination by employers (Kelly & Dobbin, 1998). Researchers have

focused a large body of research about sex segregation and its effect on the disparity in wages

between men and women (Kmec, McDonald, & Trimble, 2010). Employers were encouraged to

take positive steps to end discrimination, including implementing programs to train, hire and

promote individuals from disadvantaged groups (Kelly & Dobbin, 1998). An affirmative action

policy of the 1970s and 1980s revolved around sex segregation allowing women to enter the

corporate world; however, employers began placing women into roles that were driven by gender

stereotypes. Although benefiting directly from this movement, women were positioned in

organizations based upon stereotypical assessment of their strengths and weaknesses based on

their gender. Therefore managers began to place women in task positions that highlighted

communication skills, technical skills, and jobs with service-based components (Aldoory &

Toth, 2002).

Recruiters, employers, workers, and job seekers are influenced by stereotypical

preconceptions of women's and men's perceived occupations (Kmec et al., 2010). According to

tenets of expectations states theory, an individual's perceptions of stereotypical workplace job descriptions shape an individual's workplace behaviors and possibly their career choices (Ridgeway & Correll, 2004). Furthermore, expectations states theory suggests that individuals performing gender specific work will deem gender specific work as appropriate and that they will follow traditional preconceptions of male and female workplace competency. This becomes especially important as management often assigns workers to jobs based on preconceived traditional gender expectations and roles (Kmec et al., 2010).

A logical interpretation of this research is that male college students attempting to decide which career choice avenues that they will follow will be guided by stereotypical gendered professions. An example is the field of public relations; more than 70 percent of the employees in the field of public relations are female (Aldoory & Toth, 2002). Conjecture about the roots of women dominating and occupying positions in public relations is anecdotal, but some research about public relations suggests that affirmative action policies during the 1970s have contributed to the explosion of women in the public relations field (Aldoory & Toth, 2002). Since this development, data from subsequent research suggest that men believe that if a similarly qualified man and woman applied for the same public relations job, the woman would be hired (Grunig, Toth, & Hon, 2001). The United States Bureau of Labor Statistics (2010) projects that the next generation of skilled workers will need to have proficiency in communication, problem solving, and multi-tasking; this skill set is highly sought after by current employers and will dominate job descriptions over the next twenty years. Communication ability has become a perceived gendered skill set, with most public relations professionals believing women have a clear advantage over men when communicating (Aldoory & Toth, 2002).

However, as the economy shifts and as future jobs are being created and expanded over the next two decades, the majority of these jobs will require advanced education and are considered technical and service jobs (Bureau of Labor Statistics, 2010). This is alarming due to perceptions of men and women surveyed in a 2000 study that indicated individuals believe women are more likely than men to be hired for technical jobs (Aldoory & Toth, 2002). Furthermore, men are more likely to stereotype gender appropriateness of a given profession and may be more resistant than women in choosing professions considered gender specific (Kmec et al., 2010).

To exascerbate the above problem, there continues to be a widening gender gap in college student enrollment, and little is understood about how gender identity development process plays a role in the career choices of male college students (Harris, 2010). Most studies focus primarily on describing gender-related conflicts and challenges among college men rather than the process of masculinity identity development in college (Harris, 2010). Prior research suggests males' perceptions of gender identity is socially constructed and based on their perceptions of societal norms (Harris, 2010). By surveying primarily first-year and second-year college students, I hope to determine which of the Bureau of Labor Statistics 30 fastest and 30 declining occupations they consider "male" jobs. Furthermore, clear understanding and insight into the psyche of incoming college freshpersons and their perceptions of career gender stereotypes may influence and guide future areas of research about gender stereotyping and the role it plays in students and their occupation choices. Using data from the Bureau of Labor Statistics and with a convenience sample that surveyed primarily first-year and second-year communication college students, the following research questions are proposed.

RQ1: Which of the 30 fastest growing occupations (Bureau of Labor Statistics, 2010) do college students classify as male?

RQ2: Which of the 30 fastest declining occupations (Bureau of Labor Statistics, 2010) do

college students classify as male?

Self-Efficacy and Career Choice

There are several vocational theories that focus on how students choose their careers.

Much of this research has focused on how an individual explores career choices based on having

explored their own traits and the environmental characteristics of certain career options (Nauta,

2007). Furthermore, personality traits contribute to an individual's career choices, and an

individual's personal characteristics are predictive of the careers they will consider and of the

career or professions they ultimately will choose (Nauta, 2007). As an individual begins to

review potential career choices, he or she analyzes the job description and the work expectations,

and their final career path is determined by three key influences: personal interests, self-efficacy

expectations, and personality traits (Nauta, 2007).

Self-efficacy is defined as individuals' confidence in their ability to successfully complete

a task (DeWitz, Woolsey, & Walsh, 2009). Self-efficacy tendencies and behaviors of an

individual may influence career-related behaviors (DeWitz et al., 2009). It is important that

academic professionals counsel students early in their academic career to help them choose a

career path that meets with their emotional and professional goals, thus satisfying their self-

efficacy needs (Nauta, 2007). The Nauta study (2007) controlled for the student's gender and his

or her year in school. Results of Nauta's study indicated that both male and female students with

a high interest in specific career choices correlate with higher self-efficacy. Moreover,

recognizing college students' self-efficacy tendencies early in their college careers may allow

academic professionals opportunities for positive self-efficacy interventions prior to their

committing to a college major or career (Nauta, 2007). As students begin to pursue their career

paths they take an inventory assessment of their attributes along with the environmental attributes of the occupation they are considering, and assess their fit into the future work environments (Erhart & Makransky, 2007). Satisfaction with one's job is directly correlated with an individual's perception of their fit with their employer and occupation.

Research has suggested that individuals base their career choices on their perceived "fit" into an environment (DeWitz et al., 2009). Personality traits along with an individual's level of self-efficacy are driving factors influencing individuals' choices as they begin to assess their career aspirations. Previous research has demonstrated a strong correlation between individuals' assessments of their purpose in life and strong student success (DeWitz et al., 2009). Students who have clearly defined career aspirations and academic goals experience a more successful and smoother college life than students who are unsure of their future career (DeWitz, et al, 2009). Using survey methodology, this study will ask primarily first-year and second-year college students their views on the future possibility of working in predominantly female or male gendered careers, and if gender dominated careers are viewed as unacceptable to them and their peers. Garnering understanding of the mindset of current students' views on working in careers dominated by either sex will assist academic professionals in crafting stronger messages that will encourage male and female students to pursue careers that they currently may not consider. Survey questions will be asked of primarily first-year and second-year college students about their perceptions of gender stereotypes to understand whether their societal view of gender is influencing their career choices.

RQ3: Do perceptions of career gender stereotypes influence college students' career choices?

College Students' Perceptions of Masculinity

There are several gender studies that have observed that men and women behave differently and assume unique or different gendered roles in society (Adebayo, 2010). Historically, the division of labor in most cultures had women performing domestic work while men pursued more labor specific work. Moreover, women have focused on "family work" that some argue make them better at communication and task related skill sets, while decision-making skill sets are perceived to fall into a man's dominion (Ayenibiowo, 2010).

Whetherall and Edley (1999) conducted research about males and their perceptions of the role masculinity plays in their understanding of themselves as men. It is important to recognize that their research indicates that a male's notion of self and how he conducts himself in his world is regulated by a continuing shared form of sense-making that he has learned from males he has associated with, and will continue to associate with, throughout his life. Men interviewed in Whetherall and Edley's (1999) study were concerned with maintaining several constructs in regards to their notion of self; they want to establish themselves as reasonable human beings, as individuals with certain reputations, and as co-operative individuals. As males reach adulthood they become aware that they are responsible for their own actions and behaviors; however, they may be unaware of being influenced by traditional hegemonic societal gendered stereotypes (Whetherall & Edley, 1999)

Edwards and Jones (2009) developed a theory about college-age men and their gender identity. Their study posited that men develop their gender identity through constant interaction with society's expectations of them as men. Moran (2001) examined psychological research that focused on the role "purpose in life" plays on students' success and ultimately their retention at traditional four-year colleges. Purpose in life theory is based on Viktor Frankel's (1959)

theoretical framework that posits that individuals seek to fulfill as much meaning in their life as

possible, and as individuals finds their purpose in life, it gives justification for their existence.

Furthermore, Moran's research suggests that as their personal values and beliefs help act as

guiding framework and contribute greatly to their decision-making when choosing their vocation

(Moran, 2001). Moreover, males are defined by society's expectations as to who they should be,

but more importantly who they should not be (Moran, 2001).

As male college students begin to make their career choices they are inundated with the

expectations of society, and these experiences conflict with the jobs that are available versus the

jobs that are socially acceptable. Edwards and Jones (2009) noted in their study that the

expectations of society along with male college students' conformity with traditional definitions

of masculinity helps to explain the behaviors observed in college men who participated in their

research. Men explained that as they grew older, society's expectations of them became more

restrictive; they began to believe they were supposed to be tough, play sports, be competitive,

and become sexually active, and, most importantly, not be viewed as feminine or be recognized

as having feminine qualities (Edwards & Jones, 2009).

   This research is supported by a study conducted by Harris (2010), who argues that academic

administrators and college educators know little about the gender identity development process

of college students. Harris (2010) stresses the importance of administrators having a better

understanding of male students and their needs, as the number of male students continues to

decline on college campuses. Furthermore, Harris (2010) argues that masculinity and gender are

socially constructed and intersect with other identity dimensions, creating and emphasizing the

influence social contexts have on an individual's identity development. Student retention

continues to be a problem for academic administration professionals as they attempt to increase

the graduation rates of incoming freshmen as they begin their college educational careers. Many colleges within the United States are experiencing a 60/40 split on their campuses, with female students comprising the largest gender group of students (Behrend, 2009). This study will utilize The Bem Sex-Role Inventory (BSRI; Bem, 1974) with the goal of understanding how current college students rate themselves in terms of masculinity, femininity, and androgyny.

RQ4: Does gender identity influence college students' perceptions of career gender stereotypes?

<div align="center">Chapter 2</div>

<div align="center">**Method**</div>

Participants & Procedures

The sample of this study was composed of 147 students enrolled in a university-required public speaking course and 21 communication majors enrolled in a communication theory course. All students attended a midwestern university. Students were required to read and sign an informed consent document (see Appendix A). The university research protocol and informed consent document were both reviewed and approved by the Eastern Michigan University Human Subjects Review Committee for use from April 6, 2011, to April 5, 2012. Using a convenience sample, the students answered a 147-question paper survey in class. A total of 168 students were surveyed; 89 were female (.53%) and 79 were male (.47%). The average age was 21.6 years. Sixty-three students were first-year students, 40 were second-year students, 23 were third-year students, and 39 were fourth-year students. Three students chose not to self-report their class year. Students self-indicated 56 different majors, representing a diverse cross section of college departments and programs of interest (see Appendix B). Ninety-three students surveyed had at least one parent who graduated from college (51 male, 42 female). Seventy-three students

surveyed indicated neither parent graduated from college (27 male, 46 female). Two students chose not to indicate an answer. Participation in the study was voluntary. Students did not have to participate and could change their mind at any time and withdraw from the study without negative consequences. For their participation, students may have received extra credit, depending upon the instructor's discretion.

Measures

To assess the perception of students and their views about career gender stereotypes, two surveys were created (Bureau of Labor Statistics 30 Fastest Occupations and the Bureau of Labor Statistics 30 Fastest Declining Occupations Survey; and College Student Self-Efficacy Career Survey) along with the Bem Sex-Role Inventory measure. The first survey consisted of 60 questions based on the 30 fastest growing and 30 fastest declining occupations as determined by the 2010 Bureau of Labor Statistics (2010; see Appendix D and E). Participants in the study were asked to determine, on a 7-point Likert scale (*strongly disagree, moderately disagree, slightly disagree, undecided/neutral, slightly agree, moderately agree,* and *strongly agree*), if the fastest growing and fastest declining occupations are considered male professions.

 College Student Self-Efficacy Career Survey (see Appendix G)

 College Student Self-Efficacy Career Survey is an 18-item questionnaire that attempts to determine if college students' perceptions of male-dominated careers or female-dominated careers correlate with career choice bias. These data have been analyzed and quantitatively assessed to determine average linkage between groups and to see if correlations between the fastest growing occupations and fastest declining occupation groups exists based on career gender bias.

The Bem Sex-Role Inventory (BSRI) (see Appendix H)

The Bem Sex-Role Inventory (Bem, 1974) is a 60-item measure designed to measure psychological characteristics that are consistent with traditional sex role attributes. The instrument has 20 items traditionally associated with masculinity, 20 items associated with femininity, and 20 that provide an index where participants provide socially acceptable answers. The Bem Sex-Role inventory is based on the premise that individuals internalize society's sex-typed standards of what is considered desirable behavior for men and women (Bem, 1974). Character traits are considered masculine or feminine based on an individual's internalization of societal gender standards and of what is perceived to be acceptable behavior for men and women. The BSRI scale has become primarily a neutral measure to assess an individual's masculine, feminine, or androgynous traits, and was used in this study to determine if an individual's masculinity, femininity, or androgyny score influenced student perceptions of career gender stereotypes. Internal consistency and reliability of the Bem Sex-Role Inventory demonstrate the scale to be highly reliable in the original BSRI study (Bem, 1974). Previous results of BSRI have indicated reliability index scores of Masculinity a =.86, Femininity a = .80, and Androgyny a = .85

Chapter 3

Results

Research Question One asked participants which of the 30 fastest growing occupations (Bureau of Labor Statistics, 2010) classified as male. To answer RQ1, a statistical analysis was performed using descriptive statistics to establish linkage between groups with rescaled distance cluster combinations (refer to Table 1 for means and standard deviations). The results of the statistical analysis indicate that 15 of the Bureau of Labor Statistics fastest growing occupations

are considered male occupations, 5 are considered female occupations, and 10 are considered

unisex occupations (see Table 1).

Research Question Two asked participants which of the 30 fastest declining occupations

(Bureau of Labor Statistics, 2010) they classified as male occupations. To answer RQ2, a

statistical analysis was performed using descriptive statistics to establish linkage between groups

with rescaled distance cluster combinations (refer to Table 2 for means and standard deviations).

The results of the statistical analysis indicate that 17 of the Bureau of Labor Statistics fastest

declining occupations are considered male occupations, 3 are considered female, and 10 are

considered unisex (see Table 2).

Research Question Three asked if perceptions of career gender stereotypes influence college

students and their career choices. To answer RQ3, male versus females careers were selected

based on the 30 fastest growing professions and the 30 fastest declining professions. Male

dominated careers were chosen and then were summed as a score for male dominated careers. A

logistic progression was performed. The results showed that there is a significant effect of

perceived male-dominated career on career choice, $R^2 = .05$, χ^2 (3, $N = 168$) = 8.09, $p = .04$. For

female dominated careers, there was not significant effect on career choice, χ^2 (3, $N = 168$) =

1.11, $p > .05$.

Research Question Four asked if gender identity influences college student perceptions of

career gender stereotypes. The results of Research Question Four indicated that among the 60

careers, participants selected 31 careers as male (see Tables 1 and 2). Participants designated

fewer careers as female and therefore less data about female career choices were available when

running correlation data. Masculinity (MBSR) does not show significance, however, femininity

(FBSR) shows significance r = (.585). There were no scores reported for Androgyny

(ABSR).The results showed that there is a correlation between A (femininity) and B (gender stereotypes), r (168) = .17, p = .03. Demographic factors also impact student perceptions of those careers, R^2 = .14, F (9, 155) = 2.59, p< .01.s; specifically, the gender of the participant (β = .25, p< .01) and the educational level of their parent (β = - .19, p = .02) also impacted the results.

Student Perceptions: *Table 1*

Results of 30 fastest growing professions survey and gender views of careers on completion.

Profession	Gender	Minimum	Maximum	Mean	Std. Deviation
			Descriptive Statistics		
Biomedical engineer	Male	1	7	5.02	1.590
Network system/data	Male	1	7	5.14	1.522
Financial examiner	Male	1	7	4.90	1.471
Medical scientists	Male	1	7	4.86	1.466
Shipping, receiving, Traffic clerks	Male	1	7	4.69	1.50
Biochemist/physicists	Male	1	7	4.88	1.617
Electrical assembler	Male	1	7	5.53	1.548
Computer software engineers	Male	1	7	5.31	1.434
Machinists	Male	1	7	5.72	1.382
Compliance officer	Male	1	7	5.07	1.428
Environmental engineer	Male	1	7	4.90	1.488
Computer software engineer	Male	1	7	5.26	1.405
engineer/technician	Male	1	7	4.89	1.483
Lathe, turning machine setters, operators, metal and plastic	Male	1	7	5.36	1.545
Environmental Eng.	Male	1	7	4.87	1.498
Home health aides	Female	1	7	2.85	1.360
Personal home care	Female	1	7	2.74	1.436
Skin Care specialists	Female	1	7	2.78	1.603
Dental assistants	Female	1	7	3.22	1.390
Physical therapist asst.	Female	1	7	3.40	1.279
Office, administrative	Unisex	1	7	3.77	1.357
Physical therapist aid	Unisex	1	7	3.71	1.34
Dental hygienists	Unisex	1	7	3.56	1.784
Information clerk	Unisex	1	7	3.59	1.331
Veterinarians	Unisex	1	7	3.98	1.580
Pharmacy tech	Unisex	1	7	3.98	1.379
Survey Researcher	Unisex	1	7	4.24	1.406
Physical therapists	Unisex	1	7	4.31	1.488
Occupational therapists asst.	Unisex	1	7	3.62	1.277
Fitness trainer, Aerobics trainer	Unisex	1	7	4.48	1.676

Student Perceptions: *Table 2*

Results of 30 fastest declining professions survey and gender views of careers on completion.

Profession	Gender	Minimum	Maximum	Mean	Std. Deviation
			Descriptive Statistics		
Farmers/Ranchers	Male	1	7	5.69	1.639
Postal service, mail Sorters, processors	Male	1	7	4.51	1.404
Athletic trainer	Male	1	7	5.27	1.616
First line sup., ETC.	Male	1	7	5.01	1.442
Packers/Packagers	Male	1	7	4.99	1.514
Cutting, punching and press setters/operators	Male	1	7	5.46	1.540
Machine feeders	Male	1	7	4.97	1.479
Door to door sales	Male	1	7	4.66	1.646
Paper goods, machine setter/operator	Male	1	7	4.61	1.352
Computer operator	Male	1	7	4.99	1.390
Laborers, freight, ETC.	Male	1	7	5.75	1.488
Agricultural workers	Male	1	7	5.19	1.524
Postal service, mail Inspectors, testers, Sorters, samplers	Male	1	7	4.73	1.479
Grinding, lapping, Polishing, buffing tool setters/operators	Male	1	7	5.65	1.493
Textile winding, machine Setters/operators	Male	1	7	5.00	1.782
Personal financial Advisor	Male	1	7	4.52	1.476
Multiple machine Setters/operators	Male	1	7	5.23	1.537
Sewing Machine Operator	Female	1	7	2.20	1.486
Order clerks	Female	1	7	3.48	1.353
File Clerks	Female	1	7	3.45	1.282
Data entry keyers	Unisex	1	7	4.02	1.471
Physician assistants	Unisex	1	7	3.83	1.549
Telemarketers	Unisex	1	7	3.82	1.437
Veterinary technologists and technicians	Unisex	1	7	3.64	1.493
Medical asst.	Unisex	1	7	3.69	1.405
Self-enrichment educational teachers	Unisex	1	7	3.66	1.512
Switchboard operators	Unisex	1	7	3.60	1.549
Mail clerks, mail machine operator	Unisex	1	7	4.10	1.381
Postal serv. clerk	Unisex	1	7	3.99	1.433
Photographic Operator	Unisex	1	7	4.44	1.381

Chapter 4

Discussion

Growing and declining occupations

This study takes a closer look at primarily first-year and second-year college students and endeavors to understand if career bias towards gender-dominated professions may be leading to college students' lower enrollment rates and lower graduation rates. The results of this study are crucial first steps in support of future career gender research that is required to further understand the role career gender bias plays in college student retention and student success and graduation rates. This study has heuristic value within the communication discipline and also as a gendered study concerning college students and the messages they are receiving with regard to masculinity and gender stereotypes that may be influencing their career choices.

Adebayo (2010) observed that men and women behave differently and assume unique or different gendered roles in society and posited that the division of labor in most cultures had women performing domestic work while men have pursued more labor specific work; thus, clear separation and expectations of men and women developed and even today male and female students continue to define certain jobs as gender-specific. Participants in this study clearly designated professions into male and female categories; however, a surprising finding was that unisex occupations emerged as a separate and distinct category. Female students are not inhibited and appear to feel comfortable pursuing male, female, or unisex careers, whereas male students appear resistant to pursuing female dominated or unisex careers. It would seem a logical interpretation of this study that male students are enrolling in college at lower rates into college due to their self-efficacy perceptions of not fitting into the careers (Nauta, 2007) currently developing and growing in the United States.

Generations of our female students have been encouraged to enter professions that were once considered off-limits to their mothers and grandmothers (Berhand, 2009). The success of women entering the workforce has been great success; however, as the career climate continues to change and evolve, we must be cognizant of the messages we are sending (or not sending) to our male students. Simply assuming students will gravitate towards growing professions without taking into consideration the emotional, societal, and gender implications will prove disastrous to the current declining male student population. Our economy has shifted the demand for traditional blue-collar jobs to white-collar jobs, and from labor intense occupations to service-based occupations and technical occupations (Barden & Kroll, 2003).

Obvious themes developed and clear subgroups emerged such as the fact that medical and health occupations represent 19 of the fastest growing occupations, while science and environmental careers round out the list representing 11 of the remaining fastest growing occupations. The United States work force will be dominated by health care occupations with less opportunity for career advancement growing. Reviewing the fastest growing occupations lists, a surprising trend becomes apparent. Only five occupations will require a minimum of a bachelor's degree (computer software engineer, systems, environmental engineer, computer software engineer, applications, dental hygienists), while four occupations require advanced education (biomedical engineers, medical scientists, biochemists and biophysicists, and veterinarians). This leaves the remaining 21 occupations as two year degrees or certificate programs, suggesting a greater divide between high income earning professions and low-paying occupations with pay rates that may languish for years. Moreover, future areas of research should focus on the male gender and how their perception of self directly relates to their career choices.

Masculinity appears to be a learned trait, and students conforming to prescribed societal standards may be choosing or not choosing careers based on these standards (Whetherall & Edley, 1999). Male and female students both questioned in this survey designated professions as male, female, and unisex. Therefore career and education professionals must be aware of societal career gender bias perceptions and take proactive measures that encourage both male and female students about career opportunities in fields students may initially reject. Furthermore, as the employment world continues to change and employers seek a more educated workforce it is important that academic professionals refine the communication messages that are being sent to high school students and first year college students.

Those students' perceptions of masculinity and femininity correlated with their view about the current growing and declining occupations may offer insight into the reasons behind how students perceive and choose certain careers over others. Kmec, McDonald, & Trimble (2010) note that a large body of research about sex segregation and its effect on the disparity in wages between men and women exists; however, gender studies focusing on males and their views on growing careers dominated by women need to be encouraged and funded by our universities and colleges.

With the advent of technology, the assumption is that our culture continues to become amalgamated and homogenized; however, the results of this study indicate that clear differences between our male and female students exist. This study also offers an interesting view into the perceptions of gender when it comes to college students viewing jobs as male, female, and unisex. Female college students are holding the same career gender stereotypes as male students; however, female students do not seem to be as hindered by career gender stereotypes as male students. This traditional view of careers as male, female, or unisex occupations is alarming as

the lines between male and female careers appear to be blurring. Kmec, McDonald, & Trimble (2010) detail that men are more likely to stereotype gender appropriateness of a given profession and may be more resistant than women in choosing professions considered gender specific.

Future research needs to be conducted to see if this gendered view of occupations is perpetuating traditional barriers that have kept women from obtaining management and leadership roles in large organizations. As this study indicated, many of the growing positions (home care assistant, physical assistant, and dental assistant) are perceived as female occupations and also are careers that do not require advanced education. It is logical to assume that women will not be able to reach management level in these growing medical fields if they do not pursue advanced degrees. Barriers to leadership roles will continue in these growing occupations if college students are not made of aware of their gender career perceptions.

Gender research has traditionally focused on marginalized groups of society; however, results of this study indicate that perceptions of masculinity and gender views are shared and categorized by both males and females. As Harris (2010) notes, previous studies have focused on describing gender-related conflicts and challenges among college men rather than the processes of masculinity and identity development in college (Harris, 2010). Future areas of gender research must take a closer look at the male college student and embrace a greater understanding of societal perceptions of masculinity and gender and the role they play in college course selections and male college student retention rates.

Masculinity, gender stereotypes, and college students' career choice

Individuals who scored high in masculinity were more likely to select male versus female careers given choices from the fastest growing and fastest declining occupations. Equality in the work force has made great strides forward over the last several decades (Berhand, 2009). More

representation of minority groups is now being demonstrated throughout corporate America; however, participants in this study indicate that career gender stereotypes exist despite these recent gains. Academic professionals must make a concerted effort to encourage students to pursue careers that will allow all them the opportunity to have productive careers regardless of societal career gender stereotypes.

Training sessions with educators and parents need to be encouraged and developed that begin to stress to male students as well as female students that career opportunities exist beyond his or her views of gender societal notions. Encouraging this change in position will benefit corporate organizations by having a larger body of potential employees to draw from. Colleges and universities will benefit with higher enrollment and graduation rates. Recruitment and retention in medical professions like nursing continue to be problematic due to the profession's systematic over-reliance on only one half of the population for new nursing students (McLaughlin, Muldoon, & Moutray, 2010). As one looks anecdotally at our college campuses and government agencies, it is easy to see that many of these occupations are becoming dominated by women. Forty years ago the ratio of college admissions professionals was nearly 75 percent male and 25 percent female; however, as of 2007 the ratios have now reversed, with women accounting for 75 percent to 25 percent male counseling and admissions administrator professionals (Behrend, 2009). Our academic community must make strides in recruiting more male admission personnel and attempt to achieve a balance between male and female administrators in admissions and recruiting. Furthermore, males as well as female students preparing to enter college need to be contacted often by admission personnel and high school career counselors with the specific communication messages that men are wanted and sought after in occupations they would not usually consider.

Admissions advisors and counselors at our community colleges and four year universities can't simply focus on churning in larger and larger numbers of new students without being aware of their societal career gender stereotypes and his or her perceptions of the careers currently in the highest demand. Our universities must be more than just a place for students to congregate and provide social activities while pursuing their degrees. The current generation of male and female students appears to view professions as male and female, and as data from this study indicate, several careers are becoming viewed as unisex and individuals who self-select themselves as masculine are prone to choose male careers over female or unisex careers. Future areas of communication research and career gender research are proposed to further understand this emerging trend of careers being viewed as unisex by current university students.

As careers change and evolve, male student enrollment will continue to decline unless positive communication messages about growing careers are presented to middle school and high school level students. Furthermore, admission advisers and counselors must discuss growing career segments with students while explaining their placement into career fields relating to their college major; however, based on the results of this survey, students' views on career gender stereotypes appear to be already formed by the time they are enrolled in college, and this will be an obstacle in counseling students currently pursuing academic majors.

Gender identity and college students' perceptions of career gender stereotypes
The results of this study offer a complex view of our current first-year and second-year male and female college students and their views about gender and career gender stereotypes. Cultural shifts in attitudes towards equality in the workplace appear to have made great strides. Both male and female students appear intellectually comfortable with the concept of working in fields dominated by males or females; however, barriers towards males moving into traditional female

careers like nursing still exist (McLaughlin et al., 2010). While male students are open to working in female dominated careers, the results of this study indicate they're gravitating towards careers that are viewed as male.

The literature review section in the current study notes that self-efficacy tendencies and behaviors of an individual influence their career-related behaviors (DeWitz et al., 2009). Administrative professionals must counsel students early in their academic career and help students choose career paths that satisfy their emotional and professional goals, thus satisfying their self-efficacy needs (Nauta, 2007). An individual's emotional job satisfaction is as important as their training, skill-set, and job expertise. DeWitz (2009) posited with his research that there is a strong correlation between an individuals' assessment of his or her purpose in life and strong student success. Therefore, students with clearly defined career aspirations and academic goals will likely lead to higher graduation rates than students who are unsure of their future career.

Masculinity traits in college students do not show significance; however, female students who score high in femininity on the Bem Sex-Role Inventory (Bem, 1974) also indicate that they are not deterred from pursuing careers paths conventionally viewed as male. Therefore, gender does overall influence career choices. Admissions departments throughout the United States must recognize that there are different perspectives between male and female students, and admission professionals must modify their current recruiting methods to address the findings uncovered in this study.

Male college students attempting to decide which career choice avenues that they will follow are being guided by career gender stereotypes. First-year and second-year college students appear to be open to the future possibility of working in predominantly female or male gendered

careers; however, male student participants in this study continue to lean towards traditional male careers. It is important to reiterate the findings in the study by Whetherall and Edley (1999), where their research recognized that a male's notion of self and how he conducts himself regulates his continued shared form of sense-making and continues throughout his life. Future areas of gender research should focus on male and female students and the communication messages their receiving with regards to the growing and changing labor markets in the United States. Focus group interviews and qualitative studies may offer insight into the roadblocks that discourage male students from pursuing careers dominated by the opposite gender.

Limitations and strengths

A key limitation in this study was that a limited number of college students were surveyed at one Midwestern university. A larger number of students should be surveyed at multiple universities to establish if the results are consistent. Furthermore, a more in-depth study is proposed where qualitative research can be utilized with the goal of interviewing academic professionals asking specific questions concerning the language choices they are using to guide students towards burgeoning future careers. Future research should be directed at younger students prior to enrolling into college. By having a better understanding of the mindset of younger students, messages can be crafted that may begin to shift society's current view of male versus female careers. While students appear to be more open with regard to their views on equality, they are still rooted in traditional views of masculinity, femininity, and androgyny.

The Bem Sex-Role Inventory (Bem, 1974) is a 60-item measure designed to measure psychological characteristics that are consistent with traditional sex role attributes (Bem, 1974). However, there may be some limitations to this scale based on the language choices utilized several generations ago and may not relate to a new generation of college students with differing

cultural and gender identity perceptions. Furthermore, individuals may tend to rely more on stereotypic definitions of sex roles when judging the desirability of traits for abstract referents than when rating themselves on the same traits (Choi, Fuqua, & Newman, 2008). While debate continues about the effectiveness of the BSRI, it still remains a respected scale. A more detailed review of current literature is proposed with the goal of determining if cultural shifts have made any changes towards the validity of Bem's original work.

The strength in this study was in interviewing a large cross-section of university students. The largest number of participating students was enrolled in general education public speaking courses, representing more than 56 self-selected colleges and majors. As administrators hope to solve the problem of shrinking male retention and graduation rates, it is important to interview and understand the current perceptions and viewpoints of the students themselves that hold the answer to this important question. This study is an important first step in understanding the complex intersection between gender and an individual's masculinity, femininity, or androgyny personality traits and how they influence and play a role in his or her career choices. A clear strength in this study was utilizing students enrolled in general education required public speaking classes at a midwestern university. This is an important finding, and future areas of study are proposed to uncover how career gender stereotypes are affecting enrollment and graduation rates. Future areas of research are suggested that focus on the messages college students are receiving from high school administrators and college admissions advisers as they prepare to enroll in college with the hopes of obtaining meaningful and satisfying careers.

Conclusion

The goal of this study was to determine if current university students exhibit career gender bias and classify certain Bureau of Labor Statistics job classifications as male, female, or unisex

occupations. Furthermore, with use of the Bem Sex-Role Inventory (Bem, 1974) scale this study attempted to understand if masculinity, femininity, or androgyny gender identity influences college student's perceptions of career gender stereotypes and ultimately his or her view about the growing or declining Bureau of Labor Statistics listed professions. As one reads the list of growing and declining occupations, male and female subgroups appear to be represented; however, with the development of several careers being viewed as unisex by students scoring high in femininity, an exciting trend may have been indicated. Categories of employment viewed as unisex are viewed as acceptable occupations by female students while male students appear to be uncomfortable pursuing these occupations as career paths.

The path to becoming a successful individual in our world is constantly changing and becoming more difficult. As educators stress to incoming college freshmen the importance of a quality education, we must be sure that we understand the ways in which the current student population views their world and understand if their perceptions of gender and self-play a role in their career choices. No longer can we assume gender career bias is not influencing our current college student population because of their more open acceptance of diversity on campus and in the workplace. Moreover, we can no longer assume that growing vacant jobs will be filled by male and female students without consideration or perceptions of career gender stereotypes. We must begin the process of asking our college students their views on career gender bias with the goal of understanding how to encourage all students, regardless of gender or personality traits, to pursue careers that will lead to fulfilling and productive lives. Through the use of carefully crafted communication messages, high school, college, and university professionals can begin to guide future students towards an acceptance of gender-dominated careers as an acceptable career

path for male or female students without the regard for societal stereotypes and the stigma associated with working in gender dominated occupations.

The success of our academic institutions of higher learning, along with the success of the next generation of college students, will depend on assisting more male students enrolling into programs that continue to be underserved by half of the United States population. The United States will continue to experience vast changes in the expectations of our work force. It is clear that the move towards a more technical and service-based economy is underfoot, and the number of perceived traditional male jobs will continue to decline (Jencks, 2004; Gittleman & Howell, 1995). Employers will demand a higher set of skills from subsequent classes graduating from our colleges and universities. Jobs in growing areas of employment will continue to be vacant and unfilled unless we begin to encourage our male students to begin viewing careers as opportunities for success without the attachment of career gender stereotypes and the negative stigma associated with working in predominantly male or female careers.

Therefore, it will be up to the current university and college community to begin crafting and delivering messages to the next generation of college students about the value and importance of work regardless of gender. As the university becomes a more competitive market, employers will seek out talent from institutions that prepare the largest body of trained and skilled workers without regard to their masculinity, femininity, and androgyny personality traits. Delivery of this message is proposed to begin early in a child's academic career and needs to be a message supported in the home as well academic environments.

References

Adebayo, B. (2008). Gender gaps in college enrollment and degree attainment: An exploratory

    analysis. *College Student Journal*, 42, 232-238.

    http://find.gale.group.comesproxy.emich.edu/gps/start.do?prodId=IPS&userGroupName

    =lom-emich.edu

Aldoory, L., & Toth, E. (2002). Gender discrepancies in a gendered profession: A developing

    theory for public relations. *Journal of Public Relations Research*, 14, 103-126. doi:

    10.1207/s1532754xjprr1402_2

Ayenibiowo, K. (2010).Culture and gender as predictors of undergraduates' perception of gender

    roles. *Gender & Behaviour*, 8, 2929-2947.

Bardhan, A. D., & Kroll, C. (2003). The new wave of outsourcing, *Fisher Center Research*

    Reports 1-13.

Behrend, C. (2009). Reflections on where the boys are. *Journal of College Admissions*, 4, 28-30.

Bem, S. L. (1974). The measurement of psychological androgyny. *Journal of Consulting and*

    Clinical Psychology, 42, 155-162.

Bureau of Labor Statistics. (2010). Employment projections. *United States Department of Labor*,

    http://www.bls.gov/schedule/archives/all_nr.htm#ecopro

Choi, N., Fuqua, D. R., & Newman, J. L. (2008). The Bem sex-role inventory continuing

    theoretical problems. *Educational and Psychology Measurements*, 68, 881-900. doi:

    10.1177/0013164408315267

DeWitz, S. J., Woolsey, M. L., & Walsh, W. B. (2009). College student retention: An

    exploration of relationship between self-efficacy beliefs and purpose in life among

college students. *Journal of College Student Development*, 19-34. doi:

   10.1353/csd.0.0049

Edwards, K. E. , & Jones, S. R. (2009). "Putting my man face on": A grounded theory of college

   men's gender identity development. *Journal of College Student Development*, 50, 210-

   228. http://muse.jhu.edu/journals/csd/summary/v050/50.2.edwards.html

Ehrhart, K. H., & Makransky, G. (2007). Testing vocational interests and personality as

   predictors of person-vocation and person-job fit. *Journal of Career Assessment*, 15, 206-

   226. doi: 10.1177/1069072706298105

Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7, 117-140.

   doi: 10.1177/001872675400700202

Frankl, V. E. (1959). The spiritual dimension in existential analysis and logo therapy. *Journal of

   Individual Psychology,* 15, 157-165.

Germeijs, V., & Verschueren, K. (2006). High school students' career decision-making process:

   Development and validation of the study choice inventory. *Journal of Career

   Assessment*, 14, 449-471. doi: 10.1177/1069072706286510

Gittleman, M. B., & Howell, D. R. (1995). Changes in the structure and quality of jobs in the

   united states: Effects by race and gender, 1973-1990. *Industrial and Labor Relations

   Review*, 48, 420-440.

Grunig, L. A., Toth, E. L., & Hon, L. C. (2001) Women in public relations: How gender

   influences practice. New York: Guilford.

Harris III, F. (2010). College Men's meanings of masculinities and contextual influences:

   Toward a conceptual model. *Journal of College Student Development*, 51, 297-318. doi:

   10.1353/csd.0.0132

Jencks, C. (2004). The low-wage puzzle: Why is america generating so many bad jobs and how

    can we create more good jobs?. *The American Prospect*, 15, 35-38.

    http://find.galegroup.com/gps/start.do?prodId=IPS&userGroupName=lom_emichu

Kelly, E., & Dobbin, F. (1998). How affirmative action became diversity management. *The*

    American Behavioral Scientist, 41, 960-985.

Kleinfeld, J. (2009). No map to manhood: Male and female mindsets behind the college gender

    gap. *Gender Issues,* 26, 171-182. doi10.1007/s12147-009-9083-y

Kmec, J. A., McDonald, S., & Trimble, L. B. (2010). Making gender fit and "correcting" gender

    misfits: Sex segregated employment and the non-search process. *Gender& Society*, 24,

    213- 235. doi: 10.1177/0891243209360531

Kouzmin, A., Korac-Kakabadse, N., & Korac-Kakabadse, A. (1999) Globalization and

    information technology: Vanishing social contracts, the "pink collar" workforce and

    public policy challenges. *Women in Management Review*, 14, 230-251. issn: 0964-9425

McLaughlin, K., Muldoon, O. T., & Moutray, M. (2010). Gender, gender roles and completion

    of nursing education: A longitudinal study. *Nurse Education Today*, 30, 303-307.

    doi:10.1016/j.nedt.2009.08.005

Moran, C. (2001). Purpose in life, student development, and well-being: Recommendations for

    student affairs practitioners. *NASPA Journal*, 38, 269-279.

Murray, J. L., & Hall, P. M. (2001). Gender differences in undergraduate holland personality

    types: Vocational and co-curricular implications. *NASPA Journal*, 39, 14-29.

Nauta, M. (2007). Career interests, self-efficacy, and personality as antecedents of career

    exploration. *Journal of Career Assessment*, 15, 162-180. doi:

    10.1177/1069072706298018

Ridgeway, C. L., & Correll, S. J. (2004).Unpacking the gender system: A theoretical perspective

    on gender beliefs and social relations. *Gender and Society*, 18, 510-531. doi:

    10.1177/0891243204265269

Simpson, R. (2004). Masculinity at work: The experiences of men in female dominated careers.

    Work, Employment and Society, 18, 349-368. doi: 10.1177/09500172004042773

Wetherell, M., & Edley, N. (1999).Negotiating hegemonic masculinity: Imaginary positions and

    psycho-discursive practices. *Feminism & Psychology*, 9, 335-356. doi:

    10.1177/0959353599009003012

Willcoxson, L., & Wynder, M. (August 2010). The relationship between choice of major and

    career, experience of university and attrition. *Australian Journal of*

    Education, 54, 2,175-2,190.

Wooten, K. C., & Valenti, A. M. (2008). The questionable impact of gender on job loss

    reactions: Implications for employment counseling. *Journal of Employment Counseling*,

    45, 146-155.

Appendices

Appendix A

Consent to Participate in a Research Study

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Project Title: Personal Characteristics and Career Choices
Investigator: Brian A. Golden, Eastern Michigan University
Faculty Advisor: Jeannette Kindred, PhD, Eastern Michigan University

Purpose of the Study: The purpose of this research study is to gain a better understanding of the relationship between personal characteristics and career choices.

Procedure: The primary researcher or a research assistant will explain the study to you, answer any questions you may have, and witness your signature to this consent form. You must be at least 18 years of age to take part in this study. You will be asked to complete questionnaires about your demographic information, and surveys asking your views and opinions on topics relating to gender stereotypes and career selection. Upon completing the questionnaires, you will be given a duplicate copy of this informed consent, which includes follow-up contact information, if needed. The approximate total time to complete the questionnaires should be about 30minutes.

Confidentiality: The completed survey results will be stored separately from the consent form, which includes your name and any other identifying information. At no time will your name be associated with your responses to the questionnaires. All related materials will be kept in locked file cabinets in the researcher's office.

Expected Risks: There are no foreseeable risks to you by completing this survey.

Potential Benefits: By participating in this study you will add greatly to research regarding college students and their careers.

Voluntary Participation: Participation in this study is voluntary. You may choose not to participate. If you do decide to participate, you can change your mind at any time and withdraw from the study without negative consequences.

Compensation: For your participation you may receive extra credit depending upon your instructor's approval.

Use of Research Results: Results will be presented in aggregate form only. No names or individually identifying information will be revealed. Results may be presented at research meetings and conferences, in scientific publications, or as part of a Master Thesis being conducted by the principal investigator.

Future Questions: If you have any questions concerning your participation in this study now or in the future, you can contact the principal investigator, Brian A. Golden, at bgolden@emich.edu, or Jeannette Kindred PhD (Faculty Advisor), at jkindred@emich.edu. This research protocol and informed consent document has been reviewed and approved by the Eastern Michigan University Human Subjects Review Committee for use from April 6, 2011 to April 5, 2012. If you have questions about the approval process, please contact Dr. Deb de Laski-Smith (734.487.0042, Interim Dean of the Graduate School and Administrative Co-Chair of UHSCR, human.subjects@emich.edu

Consent to Participate: I have read or had read to me all of the above information about this research study, including the research procedures, possible risks, side effects, and the likelihood of any benefit to me. The content and meaning of this information has been explained and I understand. All my questions, at this time, have been answered. I hereby consent and do voluntarily offer to follow the study requirements and take part in the study.

PRINT NAME: _____

Signature: _____ Date: _____

Appendix B

College students self-selected majors

Undecided, Special Education, Criminal Justice, Criminology, Biology, Music Production, Business, Information Science, Occupational Therapy, Construction Management, Education, Urban Planning, Social Work, Computer Information Science, Japanese Language, Religious Studies, Math, Elementary Education, Computer Science, Marketing, Mechanical Engineering, Finance, Early Childhood Education, Aviation Management, Secondary Education, Education, Electric Film Media, Nursing, Communication, Mechanic (auto), Accounting, General Education, Pre-Med, English, Hotel/Restaurant Management, Public Relations, ATH Training, Social Work, Information Technology, Literature, History, Political Science, Public Administration ,Sports Management, Actuarial Science, Sports Medicine, Science, Creative Writing, Linguistics, Public Safety, Environmental Science Writing, Geography, Psychology, Management, Speech Language

Appendix C

Demographic Questions

Part I

Please answer the following demographic questions. The information you provide below is being collected for statistical analysis only.

1. Are you: Male Female Transgender

2. Date of Birth: (MM/DD/YY) ___ / ___ / ___

3. Please select the ethnic/racial category that best represents you. Hispanic or Latino American Indian/Alaska Native Asian Native Hawaiian or Other Pacific Islander Black or African American White More than one race Unknown

4. Major _____

5. Please select your current status:

Fresh person
Sophomore
Junior
Senior
6. Are one or more of your parent's college graduates?

Appendix D

Bureau of Labor Statistics 30 Fastest Growing Occupations

This list is as follows; Biomedical engineer; Network systems and data communications analysts; Home health care aides; Personal and home care aides; Financial examiners; Medical scientists (except epidemiologists); Physician assistants; Skin care specialists; Biochemists and biophysicists; Athletic trainers; Physical therapist aides; Dental hygienists; Veterinary technologists and technicians; Dental assistants; Computer software engineers (applications); Medical assistants; Physical therapist assistants; Veterinarians; Self-enrichment education teachers; Compliance officers, except agriculture, construction, health and safety, and transportation; Occupation therapists aides; Environmental engineers; Pharmacy technicians; Computer Software engineers, systems software; Survey researchers; Physical therapists; Personal financial advisors; Environmental engineering technicians; Occupational therapist assistants; Fitness trainers and aerobics instructors.

Appendix E

Bureau of Labor Statistics 30 Fastest Declining Occupations

This list is as follows; Farmers and ranchers; Sewing machine operators; Order clerks; Postal service mail sorters, processors, and processing machine operators; File clerks; Shipping, receiving, and traffic clerks; Telemarketers; First line supervisors/managers of production and operating workers; Office and administrative support workers; Packers and packagers, hand; Cutting, punching, and press machine setters, operators, and tenders, metal and plastic; Electrical and electronic equipment assemblers; Machine feeders and offbearers; Door to door sales workers, news and street vendors, and related workers; Information and records clerks, all other; Paper goods machine setters, operators, and tenders; Computer operators; Machinists; Laborers and freight, stock, and material movers, hand; Miscellaneous agricultural workers; Data entry keyers; Inspectors, testers, sorters, samplers, and weathers; Switchboard operators, including answering services; Mail clerks and mail machine operators, except postal service; Lathe and turning machine tool setters, operator and tenders, metal and plastic; Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic; Textile winding, twisting, and drawing out machine setters, operators, and tenders; Postal service clerks; Multiple machine tool setters, operators and tenders, metal and plastic; Photographic processing machine operators.

Appendix F

30 fastest growing and 30 fastest declining occupations Survey (Bureau of Labor Statistics,

2010)

Part II
Instructions: Rate each item on the scale below indicating which occupation you believe is most likely a male profession.

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Undecided/ Neutral	Slightly Agree	Moderately Agree	Strongly Agree

1. _____ Biomedical engineer
2. _____ Network systems/Data
3. _____ Home health aides
4. _____ Farmers and Ranchers
5. _____ Sewing machine operators
6. _____ Order clerks
7. _____ Personal and home care assistants
8. _____ Financial Examiner
9. _____ Medical scientists except epidemiologist
10. _____ Physician assistants
11. _____ Postal service, mail sorters**,** processors, and processing machine operators
12. _____ File Clerks
13. _____ Shipping, receiving, traffic clerks
14. _____ Skin care specialists
15. _____ Biochemist and biophysicists
16. _____ Athletic trainer
17. _____ Telemarketers
18. _____ First line supervisors/managers of production and operating workers
19. _____ Office and administrative support workers
20. _____ Physical therapist aid
21. _____ Dental hygienists
22. _____ Veterinary technologists and technicians
23. _____ Packers and packagers
24. _____ Cutting, punching and press machine setters, operators and tenders (metal and plastic)
25. _____ Electrical and electronic equipment assembler
26. _____ Dental assistants
27. _____ Computer software engineers (applications)
28. _____ Medical assistants
29. _____ Machine feeders and off bearers
30. _____ Door to door sales workers, news and street vendors and related workers

31. _____Information and record clerks
32. _____Physical therapist assistant
33. _____Veterinarians
34. _____Self-enrichment educational teachers
35. _____Paper goods machine setters and tenders
36. ____Computer operators
37. ____Machinists
38. ____Compliance officers, except agriculture, construction, health and safety and
        transportation
39. ____ Environmental engineers
40. ____Laborers and freight, stock and material movers (hand)
41. ____Miscellaneous agricultural workers
42. ____ Data entry keyers
43. ____Pharmacy technicians
44. ____Computer software engineers and systems software engineers
45. ____Survey researchers
46. ____Inspectors, testers, sorters, samplers and weighers
47. ____Switchboard operators, including answering services
48. ____Mail clerks and mail machine operators (except postal service)
49. ____Physical therapists
50. ____Environmental engineering technicians
51. ____ Lathe and turning machine tool setters, operators, metal and plastic
52. ____Grinding, lapping, polishing and buffing machine tool setters, operators tenders,
        metal/plastic
53. ____Textile winding, twisting and drawing out machine setters, operators and tenders
54. ____Personal financial advisors
55. ____Environmental engineering technicians
56. ____Occupational Therapists assistants
57. ____Fitness trainer and aerobics trainer
58. ____Postal service clerks
59. ____Multiple machine tool setters, operators and tenders (metal and plastic)
60. ____Photographic processing machine operator

Appendix G

College Student Self-Efficacy Career Survey

Part III
Instructions: Please rate the number indicating your personal view if you were working in the context described below.

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Undecided/ Neutral	Slightly Agree	Moderately Agree	Strongly Agree

1. _____ I would not feel ashamed of working in a female dominated profession.
2. _____ I feel I must choose a career that others expect of me.
3. _____ I believe that people can essentially perform any job
4. _____ I feel angry at females who perform jobs that are traditional male jobs.
5. _____ It is important that my family and friends approve of my current or future career.
6. _____ I don't accept my own weaknesses.
7. _____ I can respect a person with a traditional female job without having to approve of their job.
8. _____ I fear humiliation if I worked in a female dominated career.
9. _____ I avoid attempts to analyze and simplify traditional male job descriptions.
10. _____ It is better to choose a career that makes you happy than to impress others.
11. _____ I have no career path in my life that I feel especially dedicated to pursuing.
12. _____ I would choose a female dominated career path even if it resulted in undesirable comments from my male friends.
13. _____ I do not feel required to work in a female dominated profession.
14. _____ I am bothered by fears of being inadequate if I choose a female dominated career.
15. _____ I believe I would be respected as an individual working in a female dominated career.
16. _____ I would not feel ashamed of working in a male dominated profession.
17. _____ I fear humiliation if I choose a male dominated career.
18. _____ I can respect a person with a traditional male job without having to approve of their job.

Appendix H

The Bem Sex-Role Inventory

Part IV

The Bem Sex-Role Inventory
Instructions: The following items are from the Bem sex-role Inventory. Rate yourself on each item, on a scale from:
1 (never or almost never true) to 7 (always or almost always true)

1. _____ self-reliant
2. _____ yielding
3. _____ helpful
4. _____ defends own beliefs
5. _____ cheerful
6. _____ moody
7. _____ independent
8. _____ shy
9. _____ conscientious
10. _____ athletic
11. _____ affectionate
12. _____ theatrical
13. _____ assertive
14. _____ flatterable
15. _____ happy
16. _____ strong personality
17. _____ loyal
18. _____ unpredictable
19. _____ forceful
20. _____ feminine
21. _____ reliable
22. _____ analytical
23. _____ sympathetic
24. _____ jealous
25. _____ has leadership abilities
26. _____ sensitive to the needs of others
27. _____ truthful
28. _____ willing to take risks
29. _____ understanding
30. _____ secretive
31. _____ makes decisions easily
32. _____ compassionate
33. _____ sincere

34. _____ self-sufficient
35. _____ eager to soothe hurt feelings
36. _____ conceited
37. _____ dominant
38. ____ soft-spoken
39. ____ likable
40. ____ masculine
41. ____ warm
42. ____ solemn
43. ____ willing to take a stand
44. ____ tender
45. ____ friendly
46. ____ aggressive
47. ____ gullible
48. ____ inefficient
49. ____ acts as a leader
50. ____ childlike
51. ____ adaptable
52. ____ individualistic
53. ____ does not use harsh language
54. ____ unsystematic
55. ____ competitive
56. ____ loves children
57. ____ tactful
58. ____ ambitious
59. ____ gentle
60. ____ conventional