

**THE EFFECT OF SEX AND GENDER ON SELF-ESTEEM:  
INTRODUCING GLOBAL GENDER SALIENCE**

by

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A thesis submitted to the Faculty of the University of Delaware in partial fulfillment of the requirements for the degree of Master of Arts in Sociology

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## **ABSTRACT**

Despite the theoretical contributions to gender theory since the 1970s and the increasing public awareness of gender identity, a gap exists between contemporary gender theory and quantitative social science research methods. Quantitative researchers oftentimes conflate sex and gender when conceptualizing and operationalizing their variables. They usually measure sex (with only male/female options), but make claims about respondents' masculinity and femininity. Some researchers try to combat sex/gender conflation by measuring gender identity (with options such as male/female, genderqueer, transgender, etc.), but they may also make assumptions about respondents' masculinity and femininity in their analyses. Gender measurements such as Bem's Sex Role Inventory and the Personality Attributes Questionnaire operationalize gender, but these measurements are arguably outdated and unpractical given their length. To address these theoretical and methodological issues in the literature, this paper introduces two gender scales—a 100-point masculinity and 100-point femininity scale—that will illustrate the importance of measuring gender independently and in addition to sex in quantitative research using the example of self-esteem. Survey results from 414 undergraduate and graduate students in a Northeastern university show differences in self-esteem outcomes when measuring for only sex and measuring for both masculinity and femininity by sex.

## **Chapter 1**

### **INTRODUCTION**

One of the biggest contributions of second wave feminism was the differentiation between sex and gender. While gender essentialists believed that sex and gender were interchangeable and differences between men and women were innate, gender theorists of the 1970s and beyond agree that there are differences between sex and gender (Morton et al., 2009; Bohan, 1993). They characterize sex as differences in anatomy, genitalia, and hormones, whereas gender is characterized as the ways in which men and women are socialized (Eagly & Wood, 2011; West & Zimmerman, 1987). From a contemporary constructivist perspective, gender is dynamic, fluid, and changing (Butler, 1999). Researchers have further elaborated on the sex/gender distinction, including those who demonstrate the minuscule biological differences between men and women (Fausto-Sterling, 1992; 2000; 2012; Friedman, 2013). As a social construct, researchers have since outlined the ways in which gender shapes us on an individual (Moore, 2006; Eves, 2004; Lorber, 1994), interactional (Ridgeway, 2009; West & Fenstermaker, 1995; Thorne, 1993; West & Zimmerman, 1987; Garfinkel, 1967), and institutional level (Williams, 2013,1992; Acker, 1992; Martin, 2004; Martin, 1998).

The public discourse on gender identity has also expanded due to increasing transgender visibility. For example, Laverne Cox was the first transgender woman to grace the cover of Time magazine in 2014. She was also Glamour magazine's 2014 Woman of the Year. Caitlyn Jenner—formerly known as Olympic athlete, Bruce

Jenner—has her own popular reality show that documents her gender transition. In addition to transgender issues, The New York Times and The Washington Post have recently reported on people's experiences who do not identify within the gender binary (Scelfo, 2015; Hesse, 2014).

Despite the theoretical contributions to gender theory since the 1970s and the increasing public awareness of gender identity, a gap exists between contemporary gender theory and quantitative social science research methods. Quantitative researchers oftentimes conflate sex and gender when conceptualizing and operationalizing their variables (Westbrook & Saperstein, 2015). Some recent studies try to combat sex/gender conflation by introducing new gender identity options (Harrison et.al, 2012; Grant et. al, 2011; GenIUSS Group, 2014), but they do not take into account the *extent* to which respondents consider themselves masculine and feminine. Researchers usually ask for respondents' sex (with only male and female options) and in much rarer cases gender identity (with options such as male, female, transgender), but they consistently provide gendered explanations for respondents' behaviors and attitudes. Gendered analyses are rooted in assumptions of respondents' masculinity and femininity, but masculinity and femininity are seldom measured. It is important to understand and measure respondents' masculinity and femininity, especially as it relates to their assigned sex at birth, for a variety of reasons. Measuring gender in addition to sex is not only theoretically sound and methodologically valid, but it also acknowledges and respects diversity, as well as identifies social inequalities that may otherwise go undetected when only measuring sex.

In a recent article, Westbrook and Saperstein document the ways in which survey design is problematic as it relates to gender measurement (2015). The authors

systematically examine the four longest-running and largest nationally representative surveys in the United States and find that all of them conflate sex and gender in several ways. The surveys only offer respondents male and female options, they measure sex when claim to measure gender, and they use gendered rhetoric throughout the survey (i.e. mother and father, sister and brother, son and daughter, etc.). Despite the limitations of survey design, some scholars argue that quantitative research can be conducive to feminist methodology (Hesse-Biber, 2007; Sprague, 2005; Oakley, 1998). Westbrook and Saperstein note, however, that little focus has been spent on new productive ways to conceptualize and operationalize gender. They explain, “Depending on the purpose of the survey, this could include questions about sex at birth, current gender identity, and/or assessments of how respondents rate themselves on scales of masculinity and femininity” (p. 543). This paper, in part, seeks to answer Westbrook and Saperstein’s call to action by introducing two gender scales—a 100-point masculinity and 100-point femininity scale—that will illustrate the importance of measuring gender independently and in addition to sex in quantitative research using the example of self-esteem.

The effect gender has on self-esteem is unclear in the extant literature. While some researchers have found men typically report higher levels of self-esteem compared to women (Egan & Perry, 2001; Alpert-Gillis & Connell, 1989), other work has found no significant differences in self-esteem between men and women (Kling et al., 1999; Maccoby & Jacklin, 1974; Erol & Orth, 2011). One of the reasons why the self-esteem literature reflects contradictory gender findings could be because researchers measure gender differently—if they do at all. For example, many researchers only measure sex, but later make gender claims in their analyses. In this

paper, I will demonstrate why it matters to measure both sex and gender—particularly masculinity and femininity—in quantitative research. Survey results from 414 undergraduate and graduate students in a Northeastern university show differences in self-esteem outcomes when measuring for only sex and measuring for both masculinity and femininity by sex.

## **Chapter 2**

### **LITERATURE REVIEW**

#### **Sex/Gender Distinction**

Before the 1970s, essentialism was the dominant discourse on gender (Lippa, Forden, & Hunter 2004). Sex and gender were conflated as it was believed that differences between men and women were innate and natural. Feminists began making the distinction between sex and gender in the 1970s, claiming that differences between men and women were a result of socialization processes (Eagly & Wood, 2011). They argued that physical sex differences are fixed, but gender differences are socially constructed and malleable (West & Zimmerman, 1987). These second wave feminists pioneered what became known as gender roles—societal norms that dictate what is considered appropriate behavior for individuals based on their perceived sex category (Eagly, 1997; Bem, 1981; 1993). The gender role framework, however, assumes that sex is fixed and unchangeable. Because of this conceptual limitation, many sociologists have since moved beyond the gender role framework, instead conceptualizing gender as independent of sex. Researchers have theorized gender in a way that acknowledges biological sex itself as made up of socially constructed categories (Fausto-Sterling, 2000; Butler, 1993; Kessler & McKenna, 1978). These shifts in gender paradigms—essentialism, gender roles, and beyond—have inspired what is now a robust literature on the social construction of gender.

The way researchers think about gender has significantly changed over the years, but there is still no consensus as to how gender should be conceptualized and

operationalized. Westbrook and Saperstein, however, outline the four sex/gender dimensions sociologists currently agree upon:

(1) Although related, “sex” and “gender” are best understood as distinct concepts; (2) there are more than two sexes and more than two genders; (3) how people identify in terms of sex or gender may not “match” how other people perceive and classify them; and (4) both identities and classifications can change over a person’s life course (2015; p. 536-537).

Theorists have made distinctions between sex and gender and have come to agree that gender is complex—a kind of complexity that cannot be captured in one question that measures biological sex. However, instead of using a gender instrument, researchers oftentimes account for gender simply by measuring sex as a dichotomous variable. In their analyses, though, they make gendered claims—often rooted in gender role theory—about their respondents. The researchers, however, only know which respondents identify as biologically male or female. Making claims with this kind of information assumes that respondents are cis-gendered<sup>1</sup>. The empirical decision to only measure sex is one that reflects the notion that there is one kind of masculinity for men and one kind of femininity for women, which, in turn, reifies the hegemonic gender order. As such, the scholars’ research process and their analysis of whatever social phenomenon they are analyzing are embedded in gender essentialism. These researchers, however, do not often recognize or acknowledge their assumptions. On the other hand, some researchers have tried to reflect the nuances of gender by creating gender measurements that vary in concept and size.

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<sup>1</sup> Cis-gender refers to people whose biological sex and gender are one in the same. The term has replaced what Garfinkel referred to as gender normals (1967).

## **Measuring Gender**

Because sociologists now recognize the conceptual differences between sex and gender, it is important to measure both sex and gender in quantitative research. Perhaps the most common and frequently used measure of gender is Sandra Bem's Sex Role Inventory (BSRI). The inventory includes 60 questions—20 that measure masculinity, 20 for femininity, and 20 that act as fillers (1993). The BSRI treats masculinity and femininity as their own independent concepts instead of polar opposites existing on one scale. As such, respondents taking the BSRI could score low in both masculinity and femininity, high in masculinity and femininity, or low in one and high in the other. The BSRI further developed to include an androgynous category for respondents who scored high in masculinity and femininity and an undifferentiated category for respondents who scored low in masculinity and femininity. Originating in the early 1970s, the BSRI was innovative in that it challenged gender polarization—at the time, the popular notion that individuals' gender clusters at one end of the gender binary or the other.

Despite its major contributions, Bem's Sex Role Inventory still has its theoretical and methodological shortcomings. The 40 masculine-feminine characteristics included in the scale are representative of what was "culturally defined as gender appropriate in the 1970s" (p. 119). It is not entirely clear if these characteristics are as salient to today's societal conceptions of masculinity and femininity (Mahalik, et al., 2003; 2005). In fact, any measure that incorporates normative content can quickly become outdated. Empirically, the BSRI is not practical for all research projects that wish to include a gendered analysis. Sixty items are too long of a measure to be included in most quantitative studies—especially for researchers who are not primarily concerned with gender.

Another gender measurement often used is the Personal Attributes Questionnaire (PAQ). The PAQ is comprised of two ratings (Spence, Helmreich, & Stapp, 1975). First, respondents rate themselves on 5-point scales for a total of 24 items. Eight items reflect femininity, 8 reflect masculinity, and the remaining 8 reflect androgyny. In addition to these self-ratings, respondents rate particular items as either typical of a male, typical of a female, or characteristic of both sexes. This scale represents respondents' stereotype ratings.

The Personal Attributes Questionnaire poses some of the same limitations as Bem's Sex Role Inventory. While the PAQ has fewer items than the BSRI, 24 items is still a lengthy measure for gender, especially for researchers who are not primarily focused on respondents' gender. Additionally, the authors conceptualized masculinity in terms of instrumentality and femininity in terms of expressivity. Even though instrumentality and expressivity may be popular cultural conceptions of gender, the use of the PAQ presumes that the researchers already understand what aspects of gender are salient to their respondents. It also does not acknowledge that respondents' gender can change over time.

The Conformity to Masculine Norms Inventory (CMNI) and its counterpart, the Conformity to Feminine Norms Inventory (CFNI), are perhaps the longest gender measurements. The CMNI includes 94 items that break down into the following 12 masculine norms: "Winning, Emotional Control, Risk-Taking, Violence, Dominance, Playboy, Self-Reliance, Primacy of Work, Power Over Women, Disdain for Homosexuals, Physical Toughness, and Pursuit of Status" (Mahalik et al., 2003, p. 6). Respondents' answers fall into one of four levels of conformity—from extreme conformity to extreme nonconformity. The Conformity to Feminine Norms Inventory

analyzes respondents' conformity to feminine norms. The CFNI includes 84 items that break down into the following 8 feminine norms: "Nice in Relationships, Thinness, Modesty, Domestic, Care for Children, Romantic Relationship, Sexual Fidelity, and Invest in Appearance" (Mahalik, et al., 2005, p. 417).

The CMNI and CFNI add to the literature because they conceptualize gender in terms of personality traits instead of gender roles (2005, p. 418). The CMNI and CFNI not only identify cultural constructions of masculinity and femininity, but also measure respondents' conformity to those gendered characteristics. For example, female respondents may identify particular feminine norms as more salient to their identity than other norms. This takes into account the socio-historical importance of gender norms, which has been missing from previous gender measurements.

Unfortunately, even though the CMNI and CFNI measure respondents' conformity to gender norms, the measures presume that the researchers already know the masculine and feminine norms most salient to their respondents. Mahalik and colleagues address this limitation by acknowledging that their measurements were defined and validated with a mostly European American, heterosexual, college student sample. Men and women of other cultures are likely to construct masculinity and femininity differently, which would in turn affect not only their levels of conformity, but the researchers' understanding of those gendered constructions.

In addition to the limitations the authors mention, the CMNI and CFNI were created using respective male and female focus groups. The CMNI and CFNI measures were tested and validated by respective male and female samples. This means that the researchers measured men's masculinity and female's femininity. While they took respondents' levels of conformity to these norms into account, the

CMNI and CFNI were created to measure men's masculinity and female's femininity. As such, these measures do not account for female's masculinity and men's femininity. Only measuring how salient certain aspects of femininity are to women and how salient certain aspects of masculinity are to men fails to capture the complexity of respondents' gender identity. One way to rectify this shortcoming is measuring the conformity to masculine and feminine norms for every respondent, irrespective of sex. Even this solution is problematic since a 178-item measure of masculinity and femininity is entirely too lengthy for a quantitative study, regardless of how central gender is to the researcher's analysis.

Some of the most recent advances in accounting for gender in quantitative research include adding more gender identity options (Harrison et. al, 2012; Grant, 2011; GenIUSS Group, 2014). The Williams Institute organized a group called Gender Identity in U.S. Surveillance that researched the best practices for making gender-inclusive surveys. They recommend a two-step approach that asks respondents for their assigned sex at birth (male, female) and their current gender identity (male; female; transgender; do not identify as female, male, or transgender). They acknowledge another promising measure for current gender identity that asks respondents to check all that apply with options including: male, female, trans male/trans man, trans female/trans woman, genderqueer/gender non-conforming, and an open-ended option to state a different identity. While still needing further testing, the second measure for current gender identity in the two-step approach is more inclusive and allows respondents to check more than one option, whereas the first measure limits respondents to one category. Limiting categorical choice might be problematic for a trans man who identifies as a transgender male, but has to choose

either male or transgender. Another example is of a genderqueer female who does not identify as transgender, feels that female is too limiting or an inaccurate statement of current gender identity, but also does not want to declare she is not female.

The two-step approach to measuring sex and gender identity is a more comprehensive way of capturing respondents' gender identities, particularly with the option to state gender identities not already listed. While this approach is beneficial for respondents, it is not without its reasonable challenges. For example, researchers might still rely on masculinity and femininity as explanations for a particular social phenomenon. While the two-step approach measures gender identity, it does not account for levels of masculinity and femininity, which in contemporary gender theory are used to describe social behavior. For example, a researcher examining intimate partner violence (IPV) might find that self-identified transmen are more likely to use force against their partners compared to cis-gender men. The researcher might theorize that the inequalities transmen experience (i.e. stigma, violence, employment discrimination, etc.) might make them more susceptible to IPV. While this may be true, the researcher has only accounted for gender identity, not the extent to which respondents consider themselves masculine and/or feminine. In fact, the transmen in the sample might be more likely to use force against their partners because they identify as more masculine than the cis-gender men. The mechanism for violence may be hypermasculinity, which is an outcome supported in the literature. The potential danger of the two-step approach is generalizing findings based on gender identity, which could unintentionally perpetuate social inequality and stigmatization. As in the hypothetical IPV study, it could be easy for the researcher to conclude that transmen are prone to violence, when in reality, hypermasculinity, regardless of how

respondents self-identify, is the mechanism for intimate partner violence. Not only is this a missed opportunity in understanding a possible mechanism for intimate partner violence, it may inadvertently promote further stigmatization of already disadvantaged groups.

There are several other measures of gender that exist in the current literature. Many of the measures purposely emphasize various aspects of gender—that is, gender identity, gender presentation, or gender behavior. For example, in her 2006 work on Black lesbian communities, Mignon Moore measures her respondents' physical attributes, the physical attributes of her respondents' mates, and the ideal attributes of the people her respondents would be attracted to (Moore, 2006). Each measure is on a 10-point scale—ranging from 1 as very feminine and 10 as very masculine. These physical attributes represent the respondents' and the respondents' mates' gender presentation, yet her conceptualization of gender is rooted in appearance and presentation—not behavior and identity as a whole. Moore restricted her conceptualization of gender to appearance because it was most applicable to her theoretical arguments, but this does not mean gender presentation scales are entirely relevant for all studies wishing to include gender.

The theoretical contributions of the sex/gender distinction have led to the many ways gender is operationalized in sociological research—including Bem's Sex Role Inventory, the Personal Attributes Questionnaire, and the Conformity to Masculine/Feminine Norms Inventories. While these gender measures have benefited the social construction of gender literature greatly, they have their limitations. These measures are lengthy, impractical, and they presume to know the aspects of masculinity and femininity that are most salient to respondents. Even recent gender

measures that ask about gender identity still do not know to what extent respondents think of themselves as masculine and feminine.

### **Self-Esteem**

Self-esteem is defined as the positive or negative perception of the self (Rosenberg, 1965). Self-esteem has been studied for decades as it has been positively correlated with success in academics (Rosenberg et al., 1995; Ross & Beckett, 2000), work settings (O’Neal et.al, 2014; Caplan & Schooler, 2006), and personal relationships (Kwang et. al, 2013; Erol & Orth, 2014). Some researchers have argued that gender differences in self-esteem exist because boys are socialized to be self-confident, assertive, and dominant, whereas girls are socialized into caring about appearance, which can cause dissatisfaction and low levels of self-esteem (Sprecher et al., 2013; Kling et al., 1999). However, prior research on gender and self-esteem is inconsistent. While some researchers have found men typically report higher levels of self-esteem compared to women (Egan & Perry, 2001; Alpert-Gillis & Connell, 1989), other work has found that there are no significant differences in self-esteem between men and women (Kling et al., 1999; Erol & Orth, 2011; Maccoby & Jacklin, 1974).

There are a few reasons as to why the self-esteem literature reflects mixed results as it relates to gender. First, it is possible that some self-esteem measures are gendered and do not reflect universal experiences of self-esteem. For example, measures that operationalize self-esteem in terms of relationship satisfaction may be biased in that societal expectations of femininity include caring for and nurturing loved ones (Burnett, Anderson, & Heppner, 1995). Another reason why the self-esteem literature contains mixed results could be because researchers are measuring gender differently—if at all.

To demonstrate these issues of gender measurement, I consider the three most cited articles on self-esteem and gender as reported from the Web of Science database. As opposed to most recently published articles, the most cited articles are the ones whose theoretical implications, methodologies, and analytical findings have been cited most often by other researchers. Finding errors in gender measurement within the most influential articles, as opposed to more recent articles, demonstrates the possibility of continual gender measurement error in subsequently published work.

Kling et al.'s study on gender differences in self-esteem is the most cited article in the Web of Science database<sup>2</sup> (1999). The authors' meta-analysis synthesizes prior studies and their contradictory findings on male and female self-esteem. While the authors maintained strict criteria for self-esteem measurements, they did not have any criteria for how the literature conceptualizes gender. Thus, it is unclear how any of the researchers from the 184 articles measured gender if they did at all. It is likely that many of these researchers measured gender with a dichotomous sex variable as Kling and colleagues refer to gender only in terms of males and females.

The results from the meta-analysis demonstrate "a consistent gender difference in self-esteem, albeit small, favoring males" (p. 471). In their analysis, they claim that males are sanctioned more harshly for gender role violation than females. While Kling and colleagues are utilizing gender role theory, it is uncertain if the authors of the articles they are analyzing conceptualize gender in terms of gender roles. While there

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<sup>2</sup> To search for the most cited articles, I used the keywords "self-esteem" and "gender." I limited the research areas to only include sociology, psychology, and women's studies journals. I sorted the search to show results from most to least cited and excluded articles that were not relevant to either gender, sex, or self-esteem.

are many ways to measure gender, the authors of the meta-analysis did not take this into consideration when selecting articles and analyzing the synthesized results. Within their discussion section, the authors note a few limitations of their study. They say, “It is possible that gender differences in self-esteem may differ when self-esteem is conceptualized and assessed differently” (p. 491). While this is certainly a concern, they do not mention that the same might be true for gender measurement. On a similar note, the authors question, “How do researchers test whether men and women base their self-esteem on different sources?” (p. 491). This question supposes that all men enact masculinity in similar ways and all women enact femininity in similar ways. As such, their question, while interesting and valid, ignores a similar concern—how do researchers test whether masculine individuals and feminine individuals base their self-esteem on different sources?

The second most cited article from the Web of Science database is Sanchez and Crocker’s work on investment in gender ideals and self-worth (2005). They use Crocker’s 35-item Contingencies of Self-Worth Scale (Crocker, Luhtanen, & Cooper, 2003), which measures self-esteem on 7 subscales: appearance, academic confidence, approval from others, competition, religious faith, family support, and virtue.

Sanchez and Crocker are particularly interested in the investment in gender ideals. They argue that the more men and women invest in their respective gender ideals, the lower their self-esteem and overall wellbeing. The authors ask a sample of college freshmen two questions relating to investment in gender ideals: “How important is it for you to be similar to the ideal woman?” and “To what extent is being similar to the ideal woman an important part of who you are?” (p. 66). Male respondents were asked about the ideal man. In addition to the Contingencies of

Self-Worth Scale, Sanchez and Crocker also included Rosenberg's Self-Esteem Scale (1965). They ultimately find that both men and women who invest in gender ideals report lower levels of self-esteem.

While the authors account for investment in gender ideals, they do not measure gender or consider the theoretical difference between measuring investment in gender ideals and actually measuring gender. While they report that both men and women's investment in gender ideals correlate with lower levels of self-esteem, only measuring the importance of gender conformity does not speak to actual gender identity. For example, if the authors measured gender, they might find that some men identify more with masculinity while other men identify more with femininity, yet both report that conforming to the ideal man is important to them. The authors might also find that both groups of men report low levels of self-esteem. As a result, they would not be able to conclude that low self-esteem is a result of gender ideal investment. The more feminine identifying men could have lower levels of self-esteem because of their gender nonconformity or because they feel they cannot achieve hegemonic masculinity. If Sanchez and Crocker measured gender, they would have a more nuanced understanding of the impact of actual gender differences on self-esteem.

The third most cited article from the Web of Science database is Martinez and Dukes' work on ethnic and gender differences on self-esteem (1991). The authors identify inconsistent findings as they relate to gender and self-esteem. While some work has found little differences between men and women's levels of self-esteem, they note that some work has shown men report higher levels of self-esteem. As a way to bridge the literature on race/ethnicity and gender, Martinez and Dukes build on the concept of "ethgender," or the combined effects of race and gender as it relates to self-

esteem. After surveying a Colorado high school, they find that white males are the only ethgender group that reports the highest self-esteem on all measures. In comparison, white and Asian females report the lowest levels of self-esteem compared to all other ethgender groups. Martinez and Dukes build on the literature that emphasizes the importance of studying race/ethnicity and gender interactively. However, their work measures biological sex and does not account for actual gender differences among racial groups.

While none of the top three articles on gender and self-esteem actually measure gender, Burnett and colleagues examine the relationship between gender roles and self-esteem (1995). Using the Personal Attributes Questionnaire, the authors find that masculinity is a stronger predictor of self-esteem than femininity. They also find that masculinity predicts stronger levels of self-esteem for all respondents and for both males and females separately. Burnett et al. not only analyzed levels of masculinity and femininity on self-esteem, but the “environmental presses for masculinity and femininity” (p. 324). In other words, they wanted to examine men and women’s beliefs that masculinity is praised by society as well as men and women’s beliefs that femininity is praised by society. They found that men who report low levels of masculinity and high levels of “environmental press for masculinity” (p. 325) report the lowest levels of self-esteem. Additionally, women who report low levels of masculinity and high levels of environmental press for masculinity also report low levels of self-esteem. Even though the authors measured both gender and sex, they did not report the effect of sex on self-esteem while controlling for respondents’ gender.

I have outlined the top three most cited articles in the Web of Science database on gender and self-esteem. While none of them actually measured gender, they do

seem to acknowledge the inconsistencies in the self-esteem literature. I suggest that part of the reason the self-esteem literature reflects unpredictable findings related to gender is because researchers conflate sex and gender. While gender measures exist, many of them are outdated, impractical, or do not account for masculinity and femininity. By introducing a 100-point masculinity scale and a 100-point femininity scale, I will explore gender differences in self-esteem.

## **Chapter 3**

### **METHODOLOGY**

#### **Sampling Method**

I electronically administered a 48 item survey to university students using Qualtrics—an online software platform for surveys. I emailed primary contacts, mostly administrative assistants, of all university majors and asked them to distribute the survey link to their undergraduate and graduate students. I contacted a total of 61 departments. I also emailed each university faculty member who taught a class with at least 70 students in the Spring 2015 semester and asked them to distribute the survey link to their classes. A total of 168 classes were included.

The distributed emails detailed a brief summary of the project followed by a link to the Qualtrics survey. Informed consent was included in the first page of the survey, which explained the IRB-approved project and its purpose, possible risks and discomforts, potential benefits, and confidentiality and anonymity efforts. As the principal investigator, my contact information was provided as well as my advisor's contact information. Informed consent was granted if respondents reported they were at least 18 years old and agreed to participate in the survey.

#### **The Survey**

The survey is divided into five sections—three of which are relevant to this analysis. The other two sections on body image and gendered appearances and behaviors will be used for other analyses. The first section includes the gender scales.

The first scale asks respondents how masculine they are on a 100-point sliding scale in which 0 is not at all masculine and 100 is extremely masculine. The second scale asks respondents how feminine they are on a 100-point sliding scale in which 0 is not at all feminine and 100 is extremely feminine. The gender scales are not accompanied by any definitions or examples of femininity and masculinity. I did not want possible examples of gender to influence respondents' understandings of their own masculinity and femininity. This counters other gender measurements, such as Bem's Sex Role Inventory and the Conformity to Masculine and Feminine Norms Inventories. By not listing examples of gender, I do not make cultural assumptions about how respondents define their masculinity and femininity. Their placements on the masculinity and femininity scales reflect their own gendered self-concepts. In an open-ended question, the survey also asks respondents if there is a specific term they use to express their gender identity. Additionally, the survey asks respondents if they consider themselves mostly feminine, mostly masculine, or mostly androgynous. This fixed response question is another way to measure respondents' gender (Harrison et.al, 2012; Grant et. al, 2011; GenIUSS Group, 2014).

The third section of the survey includes the 10-item Rosenberg Self-Esteem Scale (1965). I chose this scale because it is one of the most common validated measures and is arguably unbiased as it relates to gender. Each item is a 5-point scale that ranges from strongly agree to strongly disagree, including 5 items reversed in valence. The index ranges from 0-40. Higher scores indicate higher self-esteem levels and lower scores indicate lower self-esteem levels. The items include:

1. On the whole, I am satisfied with myself.
2. At times I think I am no good at all.

3. I feel that I have a number of good qualities.
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of.
6. I certainly feel useless at times.
7. I feel that I am a person of worth, at least on an equal plane with others.
8. I wish I could have more respect for myself.
9. All in all, I am inclined to feel that I am a failure.
10. I take a positive attitude toward myself.

The last section of the survey is basic demographics, including a question that measures biological sex. Appendix B includes the survey in its entirety.

### **Descriptive Statistics**

The sample consists of 414<sup>3</sup> students in a university in the Northeast, including 66% females, 32% males, and 2% who identified their biological sex as “other.” Of these students, about 86% are undergraduate students and 14% are graduate students.

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<sup>3</sup> While 1069 respondents started the survey, 414 completed it. Of those who did not complete the survey, most of them dropped out during the qualitative portion in the beginning of the survey. There is no way to determine which university departments or professors emailed their students the survey. As such, there is no way to test the differences between the students who completed and did not complete the survey. While it is not possible to calculate response rate biases, respondents did report their major or department. Of the 414 respondents, 57% are in STEM departments such as Engineering, Biological Sciences, and Physics; 30.5% are in the social sciences and humanities departments such as Criminal Justice, Sociology, Political Science, and Education; 11% are undeclared or did not specify their department; and 1.5% are double majoring in STEM and in social sciences or humanities. Surprisingly, most respondents are in STEM departments as opposed to the social sciences and humanities. It is possible that students who major in social sciences or humanities are more likely to enroll in classes that expose them to gender theories. However, it does not appear that department or major had significant influence on response rate.

Among the undergraduate sample, 40% are freshmen, 24% are sophomores, 18% are juniors, and 18% are seniors. The graduate students in the sample have been at the university anywhere from 1 to 6 years. Six percent of the sample is international students. For race/ethnicity and sexual orientation, respondents were allowed to select more than one answer. Seventy-two percent of respondents identify as non-Hispanic White, 9% as Asian, 6% as Black or African American, 6% as Hispanic, 5% as Biracial, 1% as Pacific Islander, and 1% as American Indian or Alaskan Native. Heterosexual respondents comprise 81% of the sample. The remaining respondents identify as gay or lesbian (5%), bisexual (8%), asexual (4%), queer (3%), and 6% specified other sexual orientations not listed, including pansexual and demisexual. Parents' level of education, as a mechanism for college respondents' socioeconomic status (SES), is measured by amount of father's and mother's education. I did not include respondent or parental annual income. As college students, respondents' annual income may not accurately reflect their SES. For example, college students who do not have an annual income, but whose parents pay for their tuition, may have a higher SES than students who work part-time and whose parents cannot afford their tuition. I did not ask for parents' annual income because respondents may not know or remember their parents' income. Sixty-nine percent of respondents' fathers have some kind of college degree, compared to 73% of respondents' mothers. An oblimin-rotated factor analysis was run for Parents' education. Its eigenvalue is 1.2 with factor loadings of 0.7760 for both mother's and father's education.

Table 1 displays the descriptive statistics of the sample, as well as statistics on the University population. Available descriptive statistics on the University were gathered from a public University report using 2013 data. The sample's student and

international statuses are similar to the overall population. In addition, the sample's racial distribution is also similar to the population even though the sample contains 4% fewer White respondents and 5% more Asian respondents. The biggest difference between the sample and the population is sex. Even though more females attend the University (58%), the sample contains 66% females, compared to 32% males. One potential reason for this sampling error is the possibility that females are more likely than males to take a survey on gender.

Additional gender descriptives are shown in Table 2. The masculinity and femininity scales are measured from 0-100. The mean of respondents' overall masculinity score is 44.07 with a standard deviation of 27.36 and the mean of respondents' overall femininity score is 54.3 with a standard deviation of 26.77. In line with previous research that suggests the importance of measuring gender using multiple fixed response categories (GenIUSS Group, 2014; Grant et al., 2011; Harrison et al., 2012), respondents were also asked to self-identify their gender. Among the sample, 55% consider themselves mostly feminine, 31% mostly masculine, and 14% mostly androgynous. Table 2 shows respondents' self-identified gender categories by sex. The sample includes 55% feminine females, 29% masculine males, 1% feminine males, 2% masculine females, and 10% and 3% androgynous females and males respectively.

Cis-gender is operationalized as mostly feminine females and mostly masculine males. The non cis-gender respondents are the masculine females, feminine males, and androgynous males and females. Among the sample, 16% of respondents are considered non-cis-gendered. While the cis-gender variable is created from respondents' self-identified gender, it is important to note that "cis-gender" is the

researcher's language. The counts of gender categories by sex are included to show that respondents exist in all gender categories. Only measuring sex and assuming that male respondents are masculine in the same ways and female respondents are feminine in the same ways overlooks the masculine females, feminine males, and the androgynous males and females. My point is not to artificially separate respondents into categories based on gender, but to demonstrate that respondents of the same sex do in fact vary by gender in potentially meaningful ways.

## **Chapter 4**

### **RESULTS**

#### **Bivariate Relationships**

The sample's mean self-esteem score is 24.84. Table 3 shows the results from the bivariate analyses of self-esteem on all independent and control variables. On the bivariate level, masculinity, femininity, and parents' socioeconomic status do not significantly affect respondents' self-esteem. Results of the t-test reveal that there are no statistically significant differences between females' and males' self-esteem. However, on the bivariate level, cis-gender respondents report significantly higher self-esteem scores than non-cis-gender respondents. Graduate students also report higher scores of self-esteem compared to undergraduate students. The most statistically significant result on the bivariate level is sexual orientation. Heterosexual respondents report higher self-esteem scores compared to non-heterosexual respondents. Race and international status are not significant predictors of self-esteem on the bivariate level.

Results from table 4 demonstrate the significant differences in masculinity and femininity between male and female respondents. Unsurprisingly, males are much more masculine than females and females are much more feminine than males. It is interesting to note, however, that standard deviation for female's masculinity is larger than the standard deviation for male's masculinity. Female respondents deviate more from the respondents' overall mean masculinity score. Even though females report

lower levels of masculinity (31.21) than males (72.03), it appears that they vary more in their masculinity compared to males.

### **Multivariate Relationships**

I ran a series of OLS regressions to determine the predicted effect the independent variables, including the gender scales, have on self-esteem. Models 1 through 4 are a step-wise analysis I conducted because of possible multicollinearity issues. Model 1 includes all control variables and their predicted effect on self-esteem. Female is a dummy variable (0=male; 1=female), as well as Heterosexual (0=non-heterosexual; 1=heterosexual), White (0=non-white; 1=white), and Undergraduate (0=graduate; 1=undergraduate). Parents' education is a factor of mother's and father's education with higher scores indicating higher levels of education. Those who identify as heterosexual and non-white have higher self-esteem compared to their counterparts. The model's adjusted R-squared is .04.

Model 2 includes all control variables and the cis-gender variable. Cis-gender is a dichotomous variable coded 1 for respondents who are mostly feminine females or mostly masculine males and 0 coded for everyone else. Adding the cis-gender variable did not change the model as both heterosexual and non-white respondents still report significantly higher levels of self-esteem. The model's adjusted R-squared is .04.

Model 3 contains the control variables and all gender variables, including both gender scales. Identifying as heterosexual and non-white still significantly predicts higher levels of self-esteem. Additionally, as respondents report higher levels of masculinity, self-esteem also increases while controlling for sex. The model's adjusted R-squared increased to .05.

In Model 4, masculinity and femininity scores are each interacted with sex to determine the marginal effects of masculinity and femininity on self-esteem for both male and female respondents. The adjusted R-squared increased to .08. The respondents identifying as heterosexual, non-white, and female report higher levels of self-esteem. Higher levels of masculinity also predict higher levels of self-esteem. The interaction between sex and masculinity is also statistically significant and Figure 1 illustrates the marginal effects masculinity has on self-esteem for male and female respondents. The x-axis depicts masculinity scores and the y-axis depicts self-esteem scores. The females who report they are not at all masculine are predicted to have higher levels of self-esteem as compared to males who are not at all masculine. The positive slopes for both males and females indicate that increases in masculinity predict higher levels of self-esteem, however, the effect of masculinity on self-esteem for males is considerably higher. At a predicted masculinity score of 35, while holding femininity constant, both males and females are predicted to have an approximate self-esteem score of 5. While controlling for all other variables, including femininity, males with a masculinity score of 100 are predicted to have an approximate self-esteem score of 15, while females with a masculinity score of 100 are predicted to have an approximate self-esteem score of 6.

While the predictor variables in Model 4 are centered in an effort to reduce correlation between masculinity and femininity and the two interaction terms, multicollinearity tests reveal that centered masculinity yields a VIF score of 12.02 and the interaction between sex and masculinity of 7.26. All the independent and control variables have a mean VIF of 4.41. I compared Model 4 to Model 3 to determine if there are any substantive changes as a result of collinear variables. Model 3 does not

have multicollinearity issues; the model has a mean VIF of 1.75 and VIF scores for each variable are under 3. While the effect of femininity on self-esteem is positive in Model 3 and becomes negative in Model 4, femininity does not have a statistically significant impact on self-esteem in either model. Because there are no substantive changes in the results, I kept the interaction terms in the final model. Multicollinearity typically only increases standard errors. As such, masculinity and its interaction with sex are conservative predictors, but the model's multicollinearity does not reduce the reliability of the model or its predictive powers of self-esteem.

## **Chapter 5**

### **DISCUSSION**

The purpose of this study is to demonstrate the importance of measuring gender independently and in addition to sex in quantitative research, while using self-esteem as an example. I show that there are differences in self-esteem when only measuring sex compared to measuring sex as well as masculinity and femininity. If the present study only measured biological sex, Model 1 would be the final model. It would be easy to interpret Model 1 by conflating sex and gender and claiming gender has no significant effect on respondents' self-esteem. This interpretation would reflect many other studies that claim gender has little to no impact on self-esteem (Sanchez & Crocker, 2005; Kling et al., 1999; Erol & Orth, 2011; Maccoby and Jacklin, 1974).

The present study measures gender in two ways—respondents' self-identified gender and two gender scales. The self-identified gender variable includes the fixed answer choices mostly masculine, mostly feminine, and mostly androgynous. This gender variable was analyzed by sex and used to create a cis-gender variable in which feminine females and masculine males were coded as cis-gender and masculine females, feminine males, and androgynous males and females were coded as non cis-gender. The cis-gender variable was added in Model 2. Researchers have recently claimed that measuring gender identity and adding more fixed-choice responses is the best practice for creating inclusive surveys (Harrison et al., 2012; Grant, 2011; GenIUSS Group, 2014). Model 2 reflects this practice. Even with its inclusion, however, only sexuality and race are significant predictors of self-esteem. If the

current study used GenIUSS group's recommendation of gender measurement, the results would most likely indicate that gender identity has no significant impact on self-esteem.

The present study also measures gender using two 100-point masculinity and femininity scales with 0 being not at all masculine or feminine respectively, and 100 being extremely masculine or feminine respectively. By placing themselves on each scale, respondents can numerically report their gender. When the gender scales are added to Model 3, masculinity becomes a significant predictor of self-esteem. As mentioned previously, Burnett and colleagues (1995) find that masculinity predicts higher levels of self-esteem for both sexes. I created Model 4 to test if masculinity predicts higher levels of self-esteem for men and women in my sample. Results from Model 4 indicate that sex and masculinity are the most significant predictors of self-esteem, respectively. Indeed, identifying as female and reporting higher levels of masculinity predicts higher levels of self-esteem. However, the effect of masculinity on self-esteem is considerably higher for males than it is for females.

While these results slightly differ from Burnett and colleagues who find that masculinity is associated with higher levels of self-esteem for men *and* women, these results are still consistent with the literature. Men's masculinity is associated with higher levels of self-esteem (Antill, 1980; Moore & Rosenthal, 1980) because masculinity is culturally valued (Sanchez & Crocker, 2005; Connell, 2005; Burnett et al., 1995). The notion that hegemonic masculinity is defined in complementary relationship to hegemonic femininity ensures male dominance and female subordination (Schippers, 2007). Women who access masculinity are sanctioned and stigmatized because female embodiment of masculinity is a threat to the hegemonic

gender order. This could explain why masculinity is a stronger predictor of high self-esteem for men and not women. Furthermore, it has been theorized that hegemonic masculinity, while the valued gender in society, is actually difficult to achieve and only achievable to white, heterosexual, middle-class men (Connell & Messerschmidt, 2006). Because hegemonic masculinity is the gender ideal for men, and hegemonic masculinity is so difficult to achieve, men are more likely than women to be sanctioned for deviating from gender norms (Connell, 1987; 2005; Connell & Messerschmidt, 2006).

The final model also indicates that femininity is not a statistically significant predictor of self-esteem for either men or women. While this may in part be explained by the decision to keep collinear variables in the final model, this result is also consistent with prior literature that finds masculinity is a stronger predictor of self-esteem than femininity (Burnett et al., 1995; Cook, 1987). Schippers's multiple configurations of femininity—hegemonic and pariah femininities—can also theoretically explain why femininity is not a predictor of self-esteem, yet women in the sample report higher levels of self-esteem compared to men (2007). Pariah femininities, subordinately positioned in relation to hegemonic femininity, describe women who are aggressive, authoritative, and sexual. While these are characteristics of hegemonic masculinity, the idea that women enact them makes them illegitimate and consequently subordinated to both hegemonic masculinity and femininity. Men who are perceived as weak and sexually incompetent do not enact pariah masculinity because weakness and sexual incompetency are feminine. Because there are no subordinate masculinities, men who enact anything other than hegemonic masculinity are deemed feminine. This supports the idea that men who report higher levels of

masculinity are more likely to have higher self-esteem. Strength, aggression, and authority are qualities women may possess, and although according to Schippers do not make women masculine, arguably, possession of these qualities may increase self-esteem. This may partly explain why femininity is not a predictor of self-esteem, yet women report higher levels compared to men.

Just because femininity is not a predictor of self-esteem does not mean this study does not uncover gendered findings. In fact, without measuring masculinity and femininity separate from biological sex (and self-reported gender identity), this study would not have found that masculinity is a predictor of self-esteem, especially for men. Qualitative data might uncover how women's masculinity and femininity relate to self-esteem.

The finding that non-white respondents report higher levels of self-esteem compared to their white counterparts is supported in the literature. Instead of internalizing negativity, people of color may attribute negativity and stigma as prejudice. Additionally, people of color may critique themselves in relation to each other as opposed to comparing themselves to more privileged white groups (Crocker & Major, 1989; Kling et al., 1999). Also supported in the literature is the finding that non-heterosexual respondents report lower levels of self-esteem compared to their heterosexual counterparts. Prior research has shown that issues with religious and spiritual communities, social support, parental attachment, and a sense of existential wellbeing have a negative effect on LGB's self-esteem (Yakushko, 2003; Wilson, 2011).

This study illustrates that measuring gender yields different and more nuanced results than only measuring sex. I chose to examine the importance of measuring

gender through the study of self-esteem as it reflects a very gendered, yet inconsistent literature. Results demonstrate that while masculinity predicts higher levels of self-esteem for college-aged males, it does not for college-aged females. On the other hand, femininity is not predictive of self-esteem for males or females. Even while controlling for gender, females are more likely than males to report higher levels of self-esteem. If the study only measured sex, the effect of masculinity on men would have been lost. Similarly, if this study had only measured respondents' self-reported gender with a nominal-level variable, it would be easy to conclude that gender does not significantly predict self-esteem.

### **Theoretical Considerations and Practical Applications: Introducing Global Gender Salience**

When asked to place themselves on each gender scale, respondents were not offered examples as to what the researcher meant by femininity or masculinity. This was done intentionally. The logic behind this is similar to Sanchez and Crocker's study on gender ideals (2005). Even though they were interested in respondents' investment in gender ideals as opposed to gender identity, they did not impose the actual content or definition of gender ideals. The authors recognize that people of a certain racial background, for example, might characterize gender ideals differently from someone of another racial background. In essence, definition of gender ideals differs depending on the social context. By focusing on the importance of gender ideal investment and not defining gender ideals, Sanchez and Crocker are able to compare gender ideal investment results across different groups—for example, different racial groups. Similarly, in this study, the gender scales did not offer respondents examples of femininity or masculinity. Gender salience theory asserts that people's gender

schema (i.e. gender identity as it relates to a combination of gendered behaviors, attitudes, personality traits, interests) needs activated in order for individuals' gender to be important in certain contexts (Spence & Sawin, 1985; Palan, 2001). Offering examples of femininity and masculinity in terms of certain behaviors, attitudes, personality traits, or interests might alienate respondents whose gender schema differs, even slightly, from the provided examples. As such, the gender scales reflect however the respondent conceptualizes his or her gender. I call these general, overarching conceptualizations *global gender salience*.

Relationships between respondents' gender scale placement and their gender schema may be correlated, but could potentially differ. In other words, particular placement on the gender scales cannot *directly* speak to respondents' gendered behaviors, personality traits, attitudes, or interests. Using the gender scales, researchers could categorize respondents into gender categories such as mostly feminine, mostly masculine, both masculine and feminine, and neither masculine nor feminine. These gender categories align with the categories derived from Bem's Sex Role Inventory. As an example, respondents who report their femininity as 50 and above and masculinity as 49 and below can be considered mostly feminine. Respondents who report their masculinity as 50 and above and femininity as 49 and below can be considered mostly masculine. Respondents who report both femininity and masculinity as 50 and above can be considered both feminine and masculine and the respondents who report both their femininity and masculinity as 49 and below can be considered neither masculine nor feminine. However, these are arbitrary decisions by the researcher and may not represent respondents' gender identity. For example, a respondent who reports being a 100 on the femininity scale and a 50 on the

masculinity scale might consider herself a cis-gender female, but according to statistical boundaries described above, would be considered both feminine and masculine. The purpose of the gender scales is not to create artificial gender categories, but to demonstrate the *extent* of the effect of masculinity and femininity on social phenomena. While the gender scales do not capture what respondents consider to be masculine or feminine, the global gender salience scores offer statistical representation of a person's overarching conceptualizations of their masculinity and femininity.

I acknowledge that there may be differences between how people self-identify their gender and how they place themselves on the gender scales. For example, a cis-gender female might place herself as 100 on the femininity scale and 50 on the masculinity scale. Another cis-gender female might place herself as 100 on the femininity scale and 0 on the masculinity scale. Similarly, a genderqueer female may also place herself as 100 on the femininity scale and 50 on the masculinity scale. Because the gender scales are numeric representations of masculinity and femininity, they may not be the best reflections of respondents' actual gender identity. If a researcher is interested in accounting for gender identity, then a nominal-level variable should be measured in addition to the gender scales.

## **Chapter 6**

### **CONCLUSION**

Despite the theoretical contributions of contemporary gender scholarship, most quantitative studies still conflate sex and gender. Researchers use respondents' biological sex to make gender claims. Some researchers have addressed this concern by urging others to include gender identity in their survey designs (Harrison et al., 2012; Grant et al., 2011; GenIUSS Group, 2014). I would argue, however, that a nominal-level variable that asks respondents if they identify as female, male, transgender, or genderqueer (among other options) does not go far enough; gender identity does not necessarily combat the issue of sex/gender conflation in quantitative studies. Even though they would know the gender identity of their respondents, researchers might still make claims about their respondents' masculinity and femininity. Unless researchers are only interested in gender normativity, I argue that masculinity and femininity need to be measured in order to make claims about how masculinity and femininity influence social phenomena. Perhaps a more appropriate nominal-level variable that measures gender can include fixed answer options of mostly masculine, mostly feminine, and mostly androgynous. In the present study, I not only included this nominal-level variable, but I also introduced two gender scales—a 100-point masculinity and a 100-point femininity scale. Using the example of self-esteem, I demonstrated that self-esteem findings would have been different if I only accounted for biological sex and/or gender identity. Without measuring masculinity and femininity, we would find that sex and gender identity do not

influence self-esteem. The gender scales allow us to see, however, that masculinity is a significant predictor of self-esteem even though females report higher levels of self-esteem.

In addition to measuring sex assigned at birth, it is important to account for respondents' masculinity and femininity. Measuring levels of masculinity and femininity is not only theoretically sound and methodologically valid, but also acknowledges and respects diversity, as well as identifies social inequalities that may otherwise go undetected when only measuring sex. Future research should use these gender scales or other similar measures with diverse samples to test social outcomes other than self-esteem.

There are a few limitations to this work. Because this study uses a convenience sample of undergraduate and graduate students, results cannot be generalized to the population. The sample is comprised of students from a Northeastern university that is primarily white, middle-class and cis-gender. While undergraduate and graduate students vary in age, it is highly unlikely the sample will reflect middle-aged and older respondents. More women (66%) took the survey than men possibly because women are more likely to respond and complete a survey about gender. Future research using the gender scales should use a methodological approach that could better account for response rate bias.

The survey used for the present study also asked respondents about how they define and would describe their own masculinity and femininity using free response questions. Future research will evaluate how these respondents make sense of their gender. This may further explain why masculinity, as opposed to femininity, is a significant predictor of self-esteem, yet females report higher levels of self-esteem.

Other researchers could also examine the ways the 100-point masculinity and femininity scales relate to qualitative data as a way to further validate the gender scales.

The gender scales are not intended to reduce the lived, gendered experiences of people. It is not possible to condense someone's gender identity, behavior, and appearance into one masculinity and one femininity scale. The intention of the scales, however, is to introduce a gender measurement that a wide range of researchers can use to more appropriately and practically measure respondents' gender as opposed to solely accounting for respondents' sex. The scales are intended to allow researchers of any discipline to more appropriately apply a gendered lens to their data and findings. The masculinity and femininity scales are an effort to demonstrate how men and women vary in their gender, which is not always reflected in the literature.

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**Appendix A**  
**TABLES AND FIGURES**

Table 1 Sample and Population Descriptives

	Sample %	Population %
<b>Sex</b>		
Male	32	42
Female	66	58
Other	2	
<b>Race</b>		
Non-Hispanic White	72	76
Hispanic	6	7
Black or African American	6	5
Asian	9	4
American Indian or Alaska Native	1	
Pacific Islander	1	
Biracial	5	3
Other*		5
<b>Sexual Orientation</b>		
Heterosexual	81	
Gay/Lesbian	5	
Bisexual	8	
Asexual	4	
Queer	3	
Other	6	
<b>Parent Education</b>		
Father's Education		
High school degree and below	17	
Some college	14	
College degree	69	
Mother's Education		
High school degree and below	15	
Some college	12	
College degree	73	
<b>Student Status</b>		
Undergraduate	86	83
Freshman	40	
Sophomore	24	
Junior	18	
Senior	18	
Graduate	14	17
<b>International</b>		
Yes	6	4
No	94	96

\*Other includes: Native American, International, Native Hawaiian, Other Pacific Islander, Non-Specific, Unknown

Table 2 Gender Descriptives

<b>Gender Scales</b>	<b>Mean</b>	<b>Std. Dev.</b>
Masculinity	44.07	27.36
Femininity	54.3	26.77
<b>Self-Identified Gender</b>	<b>%</b>	
Feminine	55	
Masculine	31	
Androgynous	14	
<b>Gender Categories by Sex</b>	<b>Male %</b>	<b>Female %</b>
Feminine	1	55
Masculine	29	2
Androgynous	3	10
<b>Cis-Gender</b>	<b>%</b>	
Yes	84	
No	16	

Table 3 Bivariate Analysis: Self-Esteem and Independent Variables

<b>Self-Esteem</b>	<b>Mean</b>	<b>Standard Deviation</b>	
	24.84	6.888	
	<b>Beta</b>	<b>Standard Error</b>	
Masculinity	0.0042	0.0134	
Femininity	0.0186	0.0138	
Parent SES	0.0028	0.5584	
	<b>Mean</b>	<b>Standard Error</b>	<b>Standard Deviation</b>
<b>Sex</b>			
Female	25.26	0.4321	6.694
Male	24.63	0.6277	6.643
<b>Cis-Gender**</b>			
Yes	25.21	0.3843	6.657
No	24.24	0.9557	6.825
<b>Heterosexuality****</b>			
Yes	25.7	0.3791	6.468
No	21.22	0.9226	7.5515
<b>White</b>			
Yes	24.63	0.4228	6.843
No	25.33	0.7609	7.097
<b>Undergraduate*</b>			
Yes	24.54	0.3902	6.838
No	26.98	0.9871	6.98
<b>International</b>			
Yes	25.95	1.375	6.151
No	24.8	0.3778	6.942

p<.05\*, p<.01\*\*, p<.005\*\*\*, p<.001\*\*\*\*

Table 4 Gender on Sex

	<b>Mean</b>	<b>Standard Error</b>	<b>Standard Deviation</b>
<b>Masculinity****</b>			
Female	31.21	1.342	20.925
Male	72.03	1.494	16.225
<b>Femininity****</b>			
Female	67.3	1.219	18.995
Male	28.57	1.798	19.528

p<.05\*, p<.01\*\*, p<.005\*\*\*, p<.001\*\*\*\*

Table 5 Model 1: Predicting Self-Esteem

	<b>Beta</b>	<b>Standard Error</b>	<b>t</b>
Female	1.1334	0.7566	1.50
Undergraduate	0.0995	0.0737	1.35
Heterosexual	3.8226***	0.9342	4.09
White	-0.0492*	0.0237	-2.07
Parent Education	-0.2134	0.5670	-0.38

p<.05\*, p<.01\*\*, p<.005\*\*\*

Table 6 Model 2: Predicting Self-Esteem

	<b>Beta</b>	<b>Standard Error</b>	<b>t</b>
CisGender	-0.1836	1.0619	-0.17
Female	1.1255	0.7614	1.48
Undergraduate	0.0987	0.0740	1.33
Heterosexual	3.8628***	1.0016	3.86
White	-0.0491*	0.0238	-2.06
Parent Education	-0.2135	0.5688	-0.38

p<.05\*, p<.01\*\*, p<.005\*\*\*

Table 7 Model 3: Predicting Self-Esteem

	<b>Beta</b>	<b>Standard Error</b>	<b>t</b>
Masculinity	0.0442*	0.0214	2.07
Femininity	0.0257	0.0214	1.20
CisGender	0.1234	1.1079	0.11
Female	1.9805	1.1872	1.67
Undergraduate	0.0814	0.0744	1.10
Heterosexual	4.0016***	1.0019	3.99
White	-0.0523*	0.0238	-2.20
Parent Education	-0.1385	0.5691	-0.24

p<.05\*, p<.01\*\*, p<.005\*\*\*

Table 8 Model 4: Predicting Self-Esteem

	<b>Beta</b>	<b>Standard Error</b>	<b>t</b>
Masculinity	0.1517***	0.0438	3.46
Femininity	-0.0015	0.0356	-0.04
Sex_Femininity	0.0572	0.0445	1.28
Sex_Masculinity	-0.1425**	0.0514	-2.77
CisGender	-1.330	1.1522	-1.16
Female	4.5949***	1.3506	3.40
Undergraduate	0.0887	0.0734	1.21
Heterosexual	3.1250***	1.0093	3.10
White	-0.0524*	0.0234	-2.25
Parent Education	-0.210	0.559	-0.38

p<.05\*, p<.01\*\*, p<.005\*\*\*

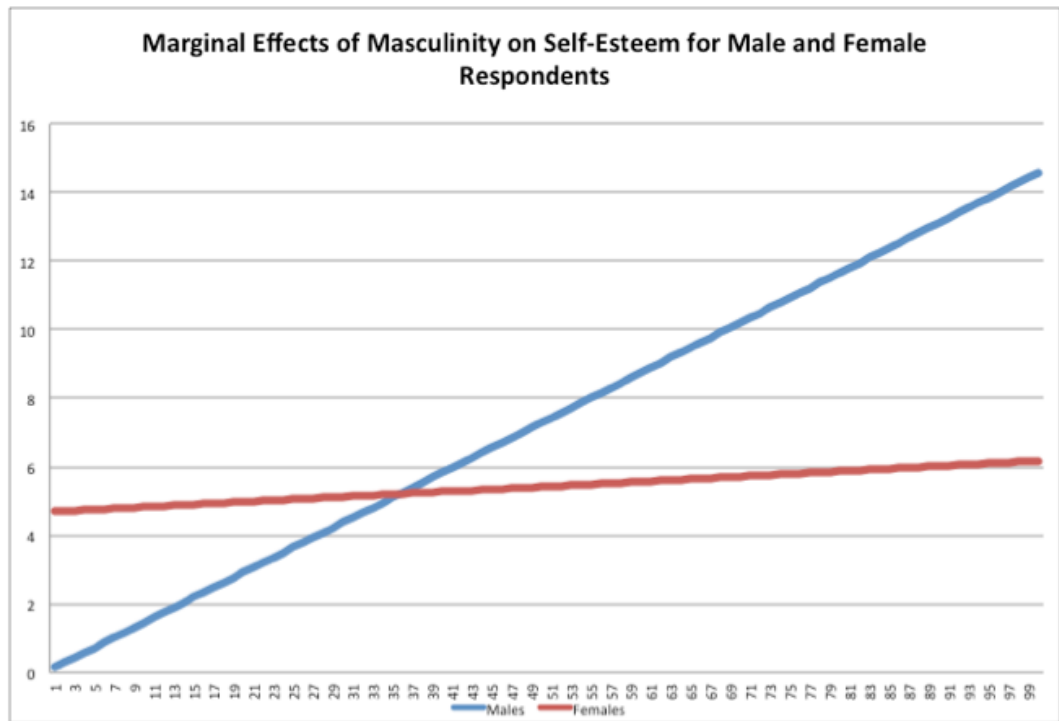


Figure 1 Marginal Effects of Masculinity on Self-Esteem for Male and Female Respondents

## Appendix B

### SURVEY INSTRUMENT

1. How often do you think about your gender?
  - a. Never
  - b. Sometimes
  - c. Often
  - d. Usually
  - e. Always
2. How important is gender to you?
  - a. Not at all important
  - b. Somewhat important
  - c. Moderately important
  - d. Very important
  - e. Extremely important
3. In your opinion, is there a difference between sex and gender?
  - a. Yes
  - b. No
4. How confident are you in your answer for question 3?
  - a. Not at all confident
  - b. Somewhat confident
  - c. Moderately confident
  - d. Very confident
  - e. Extremely confident
5. In general, how do *you* define masculinity?
6. In general, how do *you* define femininity?
7. How do you think *society* defines masculinity?
8. How do you think *society* defines femininity?
9. How would you describe your own masculinity?
10. How would you describe your own femininity?
11. How masculine are you?
  - a. A 100 point sliding scale with 0 as not at all masculine and 100 as extremely masculine
12. How feminine are you?
  - a. A 100 point sliding scale with 0 as not at all feminine and 100 as extremely feminine
13. Is there a term you use that reflects your gender?
  - a. (If yes) Please specify.

14. Do you think your race affects how others perceive your gender? For example, have you ever been in a situation in which you were reminded of your race and gender?
  - a. (If yes) How so?
15. Do you think your class (i.e. working, lower, middle, upper) affects how others perceive your gender? For example, have you ever been in a situation in which you were reminded of your class and gender?
  - a. (If yes) How so?
16. Do you think your sexual orientation affects how others perceive your gender? For example, have you ever been in a situation in which you were reminded of your sexual orientation and gender?
  - a. (If yes) How so?

**The next few questions will ask you to think about your behaviors and appearance.**

17. How often do you engage in what you consider feminine behavior?
  - a. Never
  - b. Sometimes
  - c. Often
  - d. Usually
  - e. Always
18. Please list the feminine behaviors you engage in most often.
19. How often do you engage in what you consider masculine behavior?
  - a. Never
  - b. Sometimes
  - c. Often
  - d. Usually
  - e. Always
20. Please list the masculine behaviors you engage in most often.
21. How often do you dress in a feminine manner?
  - a. Never
  - b. Sometimes
  - c. Often
  - d. Usually
  - e. Always
22. Please list some ways in which you appear feminine.
23. How often do you dress in a masculine manner?
  - a. Never
  - b. Sometimes
  - c. Often
  - d. Usually
  - e. Always
24. Please list some ways in which you appear masculine.

25. Do you think of yourself as mostly masculine, mostly feminine, or mostly androgynous?
- Masculine
  - Feminine
  - Androgynous
26. Is there anything else you would like to add or explain about your gender or other aspects of your identity?

**Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement.**

27. On the whole, I am satisfied with myself.
- Strongly agree
  - Agree
  - Neither agree nor disagree
  - Disagree
  - Strongly disagree
28. At times I think I am no good at all.
- Strongly agree
  - Agree
  - Neither agree nor disagree
  - Disagree
  - Strongly disagree
29. I feel that I have a number of good qualities.
- Strongly agree
  - Agree
  - Neither agree nor disagree
  - Disagree
  - Strongly disagree
30. I am able to do things as well as most other people.
- Strongly agree
  - Agree
  - Neither agree nor disagree
  - Disagree
  - Strongly disagree
31. I feel I do not have much to be proud of.
- Strongly agree
  - Agree
  - Neither agree nor disagree
  - Disagree
  - Strongly disagree
32. I certainly feel useless at times.
- Strongly agree
  - Agree

- c. Neither agree nor disagree
  - d. Disagree
  - e. Strongly disagree
33. I feel that I am a person of worth, at least on an equal plane with others.
- a. Strongly agree
  - b. Agree
  - c. Neither agree nor disagree
  - d. Disagree
  - e. Strongly disagree
34. I wish I could have more respect for myself.
- a. Strongly agree
  - b. Agree
  - c. Neither agree nor disagree
  - d. Disagree
  - e. Strongly disagree
35. All in all, I am inclined to feel that I am a failure.
- a. Strongly agree
  - b. Agree
  - c. Neither agree nor disagree
  - d. Disagree
  - e. Strongly disagree
36. I take a positive attitude toward myself.
- a. Strongly agree
  - b. Agree
  - c. Neither agree nor disagree
  - d. Disagree
  - e. Strongly disagree

**Questions 37 and 38 will ask you to think about your body.**

- 37. How do you perceive your body?
- 38. How do you think other people perceive your body?

**The last set of questions is basic demographics.**

- 39. What is your age?
- 40. Are you an undergraduate or graduate student?
- 41. What is your year in school?
  - a. Freshman
  - b. Sophomore
  - c. Junior
  - d. Senior
- 42. What year in graduate school are you in?
- 43. What is your major(s)/department?
- 44. What is your sex?

- a. Female
  - b. Intersex
  - c. Male
  - d. Other
45. With which racial or ethnic group(s) do you most identify? (Please circle all that apply)
- a. American Indian or Alaska Native
  - b. Asian
  - c. Black or African American
  - d. Hispanic or Latino/a (of any race)
  - e. Native Hawaiian, Aleutian Islander, or Other Pacific Islander
  - f. Non-Hispanic White
  - g. Biracial
  - h. Prefer not to answer
46. Sexual Identity (Please circle all that apply)
- a. Heterosexual
  - b. Gay/Lesbian
  - c. Bisexual
  - d. Queer
  - e. Asexual
  - f. Other \_\_\_\_\_
  - g. Prefer not to answer
47. What is the highest level of education your father attained?
- a. Some high school
  - b. High school diploma
  - c. Some college
  - d. Associate's degree
  - e. Bachelor's degree
  - f. Master's degree
  - g. Professional degree (MD, JD, MBA, MSW)
  - h. Ph.D.
48. What is the highest level of education your mother attained?
- a. Some high school
  - b. High school diploma
  - c. Some college
  - d. Associate's degree
  - e. Bachelor's degree
  - f. Master's degree
  - g. Professional degree (MD, JD, MBA, MSW)
  - h. Ph.D.

**Appendix C**  
**IRB PERMISSION LETTER**



RESEARCH OFFICE

210 Hüllihen Hall  
University of Delaware  
Newark, Delaware 19716-1551  
Ph: 302/831-2136  
Fax: 302/831-2828

DATE: January 20, 2015

TO: Brianna VanArsdale  
FROM: University of Delaware IRB

STUDY TITLE: [692537-1] Gender: Are We Doing It Wrong?

SUBMISSION TYPE: New Project

ACTION: DETERMINATION OF EXEMPT STATUS  
DECISION DATE: January 20, 2015

REVIEW CATEGORY: Exemption category # (2)

Thank you for your submission of New Project materials for this research study. The University of Delaware IRB has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

We will put a copy of this correspondence on file in our office. Please remember to notify us if you make any substantial changes to the project.

If you have any questions, please contact Nicole Famese-McFarlane at (302) 831-1119 or [nicolefm@udel.edu](mailto:nicolefm@udel.edu). Please include your study title and reference number in all correspondence with this office.