City University of New York (CUNY)
CUNY Academic Works

Theses and Dissertations | Hunter College

Spring 5-5-2022

Gender-Typing and Sports: The Perception of Gender for Group and Individual Sports Among College Students and Adults

Nicki Zenker
CUNY Hunter College

How does access to this work benefit you? Let us know!

More information about this work at: https://academicworks.cuny.edu/hc_sas_etds/843
Discover additional works at: https://academicworks.cuny.edu

This work is made publicly available by the City University of New York (CUNY).
Contact: AcademicWorks@cuny.edu

Gender-Typing and Sports: The Perception of Gender for Group and Individual Sports

Among College Students and Adults

by

Nicole Zenker Submitted in partial fulfillment
of the requirements for the degree of
Master of Arts Psychology, Hunter College
The City University of New York

March 2022

March 1st, 2022	Virginia Valian
Date	Thesis Sponsor
March, 1st, 2022	Sandeep Prasada
Date	Second Reader

Abstract

While female athletes and sports leagues have continued to be on the rise since the passing of Title IX and women have increasingly taken on non-traditional gender roles, there is still a perception that sports and physical activity are a domain for men. In particular, there are certain sports that are appropriate for men and other sports that are appropriate for women. This study seeks to expand on previous research and provide an update on how sports are viewed in the U.S in light of gender norms and the recent rise of women in positions previously held only by men. The study examined how participants from both Hunter College (N = 92) and Amazon Mechanical Turk (MTurk) (N = 96) rated 20 sports on a scale of very feminine to very masculine. The survey also examined traits defining certain sports, such as physical strength, strategy, hand-eye coordination, gracefulness, and composure and examined the relationship between gendered rating of sports and a participant's sports engagement (consumption, participation, and fandom) score. Unlike previous research, this study looked at how participants' political affiliation and scores on the Modern Sexism scale predicted gendered ratings of sports. Results of the study illustrated that the majority of sports are still viewed as primarily masculine. The extent to which a sport was seen as requiring strength and traits of Modern Sexism were significant predictors of how masculine or feminine participants viewed sports on average. No other sport attribute was predictive. Other non-predictors were gender and age of the participants, sports engagement, and political affiliation. The source of the sample (Hunter or MTurk) might have had an impact on results. Future research should look at the racial composition of the athletes and see how race plays a role in gender typing.

Keywords: Gender-typing, sports, gender norms, traditional gender roles, women in sports

Gender-typing and Sports: The Perception of Gender for Group and Individual Sports Among College Students and Adults

Sports and physical activity have historically been considered only appropriate for men but not for women (Anderson, 2005; Lopiano, 2000; Riemer & Visio, 2003). This association stems from societal beliefs about the traits and behaviors that men and women *should* and *should not* exemplify (Prentice & Carranza, 2002). For example, men are expected to be strong, independent, and athletic whereas women are expected to be quiet, submissive, and nurturing. Qualities that are associated with athletes, such as competition, strength, and team sportsmanship, align with traits deemed appropriate for the masculine role (Schmalz & Kersetter, 2006).

Women, on the other hand, are seen as possessing qualities that do not overlap with people's perceptions of an athlete. Accordingly, women have historically been excluded from the athletics domain. It was not until the invention of the bicycle in the 19th century that women really began to participate in physical activity. This major change not only allowed women to consider pursing athletics, but also liberated women in other areas such as attire, roles, and professions - it allowed women to challenge traditional gender norms (Sherrow, 1996). Despite the progress that women have made in the sports landscape, the rise of female sports has been slow. Before 1985, there was not a Women's National Soccer team in the United States and the Women's National Basketball Association did not exist. In fact, the WNBA celebrated its 25th season this past year in 2021. While women's sports have become popular over the years, especially after the passing of Title IX in 1972, there is still a perception that most sports are for boys and men and not for girls and women (Alley & Hicks, 2005; Riemer & Visio, 2003; Sobal & Milgrim, 2019; Xu, Fan & Brown, 2019). While much progress has been made in the female

sports landscape as women continue to challenge sexist barriers and societal gender norms, female sports continue to lack as much interest as male sports, as measured by TV ratings, attendance, and sponsorship deals. Additionally, girls are still not participating in sports at the same level as boys. Research conducted by the Women's Sports Foundation found that boys get 1.13 million more sports opportunities than girls. Forty percent of teen girls are not actively participating in sports, a larger percentage than the roughly thirty percent for boys (WSF Teen Sport Report, 2018; National Federation of State High School Association 2018-2019).

In addition to the limited participation of women in sports, female athletes are significantly underrepresented in media coverage, including TV sports programming as well as, more recently, on online mediums such as digital newsletters and social media (Bemstein, 2002; Cooky, Council, Mears, & Messner, 2021; Pedersen, 2002). Despite the advancements that women have made in the sports world, men's sports, specifically basketball, football and baseball, still receive the bulk of sports coverage (Cooky et al., 2021; Koivula, 1999).

Cooky et al. (2021) conducted a 30-year longitudinal study of the coverage of men's and women's sports on televised news, highlighted shows, and, most recently, online sports newsletters and social media. The data were first gathered in 1989 with follow up waves conducted in 1993, 1999, 2004, 2009 and 2019. The study found little change in the distribution of coverage of women's and men's sports over that 30-year period. In 2019, coverage of women athletes on televised news and highlight shows, including ESPN's SportsCenter, totaled only 5.4% of all airtime, a negligible change from the 5% observed in 1989 and 5.1% in 1993. The total actually drops to 3.5% if coverage of the 2019 Women's World Cup is removed. When a female sport story did appear, it usually was a case of "one and done" – a single female sports story that was surrounded by a myriad of men's stories.

Recent research examining online and social media content indicate similar trends in coverage, with the majority of content devoted to male athletes and men's sports. Research conducted in 2021 by Shotclock Media found that only 3% of SportsCenter's Instagram posts and 3% of Bleacher Report's Instagram posts were about women's sports. This is true even for sports where female athletes have seen international success, such as the Women's US National Soccer team, which has won the World Cup and Gold Medals in the Olympics several times.

A similar study in Spain found that of 6,544 tweets, 96.19% of them were about male athletes compared to 3.81% that referred to women (Sainz-de-Baranda, Ada-Lamieras & Blanco-Ruiz, 2020). TV ratings and interest for sports that have been deemed masculine in the past but are currently played by females, such as basketball, are still low in the United States and do not come close to interest in "male" sports, sports defined as masculine and played by men, such as professional football and basketball (Nielsen TV Ratings). Scheadler & Wagstaff (2018) exposed participants to highlights of women's sports for 4 weeks. That intervention had no effect on interest towards women's sports – interest still remained low. While some might argue that interest is low because women's sports are not played with as much skill as men's sports, that is not necessarily the case.

A statistical analysis comparing stats between WNBA and NBA players during the 2018-2019 season found that WNBA players are comparable to NBA players across a range of key statistical categories like field goals, two pointers, free throws, and blocks. Natasha Howard, for example, a player on the Seattle Storm, dominates the WNBA in a very similar way that Anthony Davis of the Los Angeles Lakers does. One could also argue that the definition of exciting play is subjective and the metrics for what defines good entertainment i.e., dunks, 50+ point performances – have been mostly created by male fans, coaches, commentators, and

players. The WNBA, in contrast to the NBA, is more evenly distributed – there is a higher volume of players who are at or above league average as compared to the NBA (Strupp, 2021). This type of play might be considered exciting to some although different from the traditional definition of exciting game play where one player dominates.

Exposure is not the only issue; the way in which broadcasters talk about female athletes also has an impact (Musto, Cooky, & Messner, 2017). While sports news programming attempts to be respectful towards female athletes, research has shown that sports news and highlight programming actually normalize the beliefs about men's athletic superiority and reinforce and perpetuate male stereotypes through the way TV analysts describe female athletes' performances and abilities. TV anchors believe they are treating female athletes with respect by not over sexualizing their commentary about the female athletes' performance. But sports TV analysts discuss men's sports with more excitement, engagement, and reverence - women's sports are rendered insignificant and inferior through the TV anchors' lackluster commentary (Cooky et al., 2015; Musto et al., 2017).

In 2019, women's sports were presented in bland and boring ways compared to men's sports (Cooky et al., 2021). Commentators described male athletes with words such as "Boom!", "a force!", "unstoppable!" Female athletes were rarely if ever described in this way. Commentators might argue that women's sports are in general less exciting than men's sports because of lack of skill or excitement in game play; however, that is not always true - in 2019, the US Women's National Team scored the most goals ever in a World Cup, men's or women's. In 2010, a study conducted by Amy Jones examined the portrayal of male and female Olympians participating in their sport. Jones found that there were significant differences in the ways that athletes were portrayed, including both visual cues such as camera angles and verbal cues such

as adjectives used to describe the athletes. The study also found that athletes were portrayed differently if they were participating in a gender appropriate or inappropriate sport. Male and female athletes participating in gender-appropriate sports were favorably perceived, while athletes participating in gender-inappropriate sports were unfavorably perceived. Results showed there were more body shots of the face of the athlete for female athletes and athletes participating in a "feminine" sport, e.g., female figure skaters had the longest TV coverage of their faces. The frequency of low camera angles was significantly greater in the production of masculine sports compared to that of feminine sport – low camera angles have been found to emphasize masculinity of athletes.

Despite the limited media exposure female athletes receive and the lackluster commentary that is used to describe them, female athletes have been gaining more media attention as of late either through politics – such as the WNBA's involvement in the Georgia Senator race to help get Senator Warnock elected in 2021 – or because women are taking on more non-traditional gender roles – such as Kamala Harris's election as Vice President of the United States. With the advancements that women have made, have perceptions of sports changed in recent years? As female athletes continue to break free of traditional stereotypes and tackle the bias against them, are people more willing to accept women as athletes and see sport as not only a place for men, but for women as well? If this is not the case, why is it that female sports are still not reaching the same level of popularity as male sports? Is there a way for female athletes to gain acceptance and interest in the United States?

In the present study, I explore these questions. Specifically, I examine how people define sports in terms of gender i.e., how masculine or feminine they rate a range of sports. Additionally, I analyze whether people's sports interest, participation, and consumption habits

influence how they perceive certain sports. I also analyze the effects of specific sport attributes such as strength, strategy, hand-eye coordination, gracefulness, and composure on gender-typing scores. Lastly, I look to see how political affiliation and Modern Sexism scores influence gender-typing of sports.

Gender and Gender Stereotypes

Gender refers to the socially constructed roles, behaviors, expressions and identities of men and women. It influences how people perceive themselves and each other. Masculinity and femininity have traditionally been perceived in two distinct and opposing concepts – this causes individuals to be categorized as either masculine or feminine. There is an assumption that if a baby is born female it will be "feminine" and if the baby is born male it will be "masculine" (Alley & Hicks, 2005; Bem, 1981; Hentschel et al., 2019; Martin et al., 2002). From birth, children are surrounded by information that communicates the beliefs and behaviors that are considered appropriate for each gender group (for summary, see Valian, 1998).

Gender stereotypes are both descriptive and prescriptive in nature. Descriptive components are beliefs about what men and women typically do and prescriptive components are beliefs about what men and women should do (Fiske & Stevens, 1993). Prescriptive stereotypes indicate approved (or disapproved) behavior. A violation of this perception of what men and women should do can often lead to a negative reaction. For example, women who violate prescriptive stereotypes by acting dominant are disliked and therefore less likely to be hired even though they are seen as competent (Rudman, Moss-Racusin, Glick, & Phelan, 2012). Men can also be the recipients of backlash when they violate prescriptive stereotypes by lacking agency and showing weakness. In order to avoid the negative reaction that is caused when men and

women do not follow traditional gender norms, men and women try to maintain the behavior that aligns with traditional gender roles and roles that were assigned to them at birth.

Once stereotypes form, they are easily maintained and reinforced (Cvenceck et al., 2015). People seek out information that confirms their belief, making it harder to change one's opinion. (Some scientists believe that gender stereotypes do not change over time (Haines, Deaux, & Lofaro, 2016) while others (Eagly & Koeing, 2021) believe that stereotypes are dynamic. Whether or not gender stereotypes have changed, the goal of full gender equality has not yet been achieved. In an interview research study, female managers indicated that the majority of barriers for women's advancements were consequences of gender stereotypes (Peus, Braun, & Knipfer, 2015). Gender stereotypes can be the major obstacle to women's career advancement and women's advancement in other male dominated industries, such as sports and athletics.

Historically, a female's participation in sports has not been appreciated since athletics are primarily male dominated and characterized by stereotypical masculine qualities such as strength, aggression and competition (Krane et al., 2004; Marsh & Jackson; Matteo, 1986; Messner, 1988, 1986; Snyder & Kivlin, 1977). Sports allow men to pursue, achieve, and accept prestige and positive social identity – they reinforce the stereotypical male traits. On the other hand, female athletes encounter opposition as they move into this culturally defined male territory. The opposition towards women who persist and attempt to achieve in sports often results in negative stereotyping by society (Anthrop & Allison, 1983).

One explanation for the negative evaluation of women athletes is that sport participation is perceived as incompatible with the female sex role. A female cannot be both an ideal woman and an athlete because the characteristics that constitute a good athlete are inconsistent with the characteristics that constitute a good woman. When females exhibit what society defines as

"manly traits" such as competing in physical activity, sweating, grunting, and being aggressive, their gender identity, sexual orientation, values and social roles are often questioned (Blinde & Taub, 1992; Krane et al., 2004). One study found that high school and college students judged participation in gender-appropriate sports as socially more desirable than participation in sports deemed gender-inappropriate (Holland & Andre, 1994). Schmalz and Kersetter (2006) also found that children curb their behaviors and sports participation to fit the social norms of appropriate behaviors based on gender.

Sports and Gender

Musto, Cooky, and Messner (2017) propose that sports can serve as an experimental window into the processes normalizing contemporary forms of gender inequality, for several different reasons. For one, televised sports news and highlight shows are part of a billion-dollar institutionalized sports media business that has traditionally excluded women and rewards the superiority of men. Additionally, sports can highlight underlying gender dynamics that are obscured within other ecosystems; because there are women's sports and men's sports, the differences between the two are often exposed. Lastly, it is especially difficult to challenge male dominance within an institution such as sports since there is a high value placed on a large body size, physical strength, and aggression (Kaelberer, 2018). Even as girls' and women's athletic participation has exploded in recent years, sport has remained a male dominated and male controlled institution that is very hard to change (Plaza et al., 2017; Xu et al., 2019) .

While sports in general have been defined as a male activity, women do participate in sport and physical activity. Before Title IX, 1 in every 27 girls played sports on a regular basis in the United States; today, that number has significantly increased to 1 in every 3 girls, a huge change (Aspen Institute, 2019). Despite this, as mentioned previously, gender segregation still exists

within sport activity. Some sports are played exclusively by men (e.g., baseball) while others are practiced mostly by women (e.g., gymnastics). Based on theory characterizing traditional gender roles, scholars have categorized sports into three major categories: masculine, neutral, and feminine (Greer & Jones, 2012; Koivula, 2001; Matteo, 1986). In this model, masculine sports tend to involve more direct physical contact, strength, and aggressiveness, whereas feminine sports are more likely to be marked by aesthetic characteristics such as grace and expressivity (Hardin & Greer, 2009).

In early work, Metheny (1965) characterized the attributes used to categorize a sport as feminine or masculine, work that later researchers have followed (Hardin & Greer, 2009; Jones & Greer, 2011; Koivula, 2001; Riemer & Visio, 2003). Metheny argued that sport involvement is considered either socially acceptable or unacceptable for females based upon how each particular sport conforms to traditional images of appropriate feminine behavior. Sports are considered sex-inappropriate if the nature of the sport requires women to attempt to subdue the opponent by physical force, use a heavy object, or engage in face-to-face competition where bodily contact may occur. In contrast, a sport may be defined as socially sex-appropriate for women if the body is projected through space in an aesthetically pleasing way. Whether the sport is played individually or as a team also makes a difference: team sports are considered more masculine than individual sports.

Sports that are historically feminine are those that allow women to exhibit gender-role attributes such as grace and beauty while participating (Koivula, 2001). Several studies found similar results to Metheny's original study (Hardin & Green, 2009; Riemer & Visio, 2003; Xu et al., 2019). Sports were more likely to be perceived as masculine when they involved physical

contact and the use of force and as feminine when they involved characteristics such as gracefulness and expression.

The identification of sports as masculine, neutral, or feminine is closely tied to gender beliefs. Hardin and Greer (2009) conducted a survey to examine how 14 sports were perceived in terms of gender roles. Findings of this study confirmed that men who scored higher on traditional gender role beliefs were more likely to perceive action sports, such as skateboarding and other extreme sports, and neutral sports, such as tennis, as more masculine. In the same study, researchers found that a person's perception of sports is influenced by whether they themselves participate in sports. Individuals who were more involved in fitness and sports participation were more likely to rate neutral and feminine sports as more masculine. In addition to participation, frequent consumption of highly masculine content, such as sports media, is more likely to activate the male gender schema (Clemnet-Guilltin & Fontayne, 2011). Plaza et al. (2017) updated the explicit gender stereotypes linked to sports activities and examined whether they are associated with gender, age, personal practice, and general feminization rates of participation. Explicit gender stereotypes appear to still be attached to sports activities, replicating similar results by Hardin and Greer (2009). Men rated neutral activities as more masculine than women did; however, the effects of gender and age on gender-typing were mostly independent and no interaction was observed.

Jones and Greer (2011) examined gender typing of the extreme sport of snowboarding and found that sports media exposure was a major predictor of gender typing. Participants who watched more men's sports were more likely to rate male snowboarders as more masculine, whereas individuals who watched more women's sports tended to rate female snowboarding as more feminine. Taken together, this suggests that people's gendered perceptions of sports are

likely to be informed by both their own participation in sports, as well as the extent to which they consume media related to male and female sports. The perception of a sport as more or less feminine or masculine was also found to be strongly associated with the actual percentage of female participants: the more girls and women are represented in the general population of participants, the less an activity is perceived as masculine (Plaza et al., 2017).

Based on previous findings on gender typing and sports as well as the recent increase in women in non-traditional gender roles, I replicate the Hardin and Greer 2009 study and explore other factors that may influence gender-typing in sports, including Modern Sexism and political affiliation. Endorsement of Modern Sexism – the belief that gender equity has been achieved in our society – has been found to exacerbate demands to fit gender roles. Modern Sexism (Swim et al. 1995; Swim & Cohen 1997) encompasses: (1) denial of continued discrimination (e.g., "On average, people in our society treat husbands and wives equally"); (2) negative attitudes toward women's demands for equality (e.g., "It is easy to understand the anger of women's groups in America" (reverse scored) and (3) resentment about perceived special treatment of women (e.g., "Over the past few years, the government and news media have been showing more concern about the treatment of women than is warranted by women's actual experiences"). Modern Sexism predicts political attitudes and voting behavior – voters high in Modern Sexism were more likely to support a male over female senatorial candidate (Swim et al., 1995). It was also found that gender role beliefs were a significant predictor of sports gender typing. Individuals with a higher level of patriarchal beliefs tended to polarize sports gender types, whereas individuals with a lower level of patriarchal beliefs were more likely to view sports as gender neutral (Xu et al., 2019). Given the association between political affiliation and Modern Sexism, I examine whether either plays a role in gender perception of sport.

Previous studies have explored gender-typing of sports. This study seeks to provide an update given the recent increase of female athletes and women in non-traditional gender roles. Social Role Theory (Eagly, 1987) suggests that gender stereotypes form as people observe male and female behavior in society – people are not born with stereotypes, they acquire them. While it is difficult to change stereotypes and one's opinion about a certain group of people, it is possible. Solid, long-term change requires changing the roles in which category members are typically observed to roles that require different attributes (Eagly & Koenig, 2021).

A meta-analysis conducted by Eagly et al. (2020) shows that gender stereotypes have changed over the past seven decades. In the analysis, researchers integrated 16 national representative U.S public opinion polls on gender stereotypes. Results showed that belief in competence equality increased over time, along with belief in female superiority among those who indicated a sex difference in competence. This change in gender stereotypes is likely due to the increase in labor-force participation and education among females during these years. It is possible, therefore, that increases in female sport participation and other non-traditional gender roles could influence how women are perceived. Although the relationship between participation and media consumption has been explored as it relates to gender typing, political affiliation and Modern Sexism have not yet been investigated. The goals of the study are to assess gender-typing of sports in the wake of increased female participation and success in non-traditional gender roles, and to assess the impact of sports consumption, participation, fandom (interest in sport), as well as political affiliation and Modern Sexism on gender-typing of sports. Fandom is defined by how much interest a person has in a specific sport. The following research questions were posed:

Research Questions

1. Where do different sports, both group sports and individual sports, fall on the masculine/feminine continuum?
2. Do men and women differ in their gender-typing of these sports? Does age of the participant play a role?
3. What role does sports consumption, participation, and fandom play in terms of gender-typing of sports?
4. Are there certain attributes of sport that significantly predict how masculine or feminine on average sports are viewed?
5. Will Modern Sexism have an impact on how participants perceive sports in terms of gender?

Based on previous research we hypothesized the following for each research question:

1. Overall, sports will be seen as more masculine than feminine. Similar to previous research, team sports will be viewed as more masculine compared to individual sports.
2. Men and women will perceive sports similarly in terms of masculinity-femininity. Age could have an impact given that younger generations have been exposed to more females playing sports.
3. Participants who engage with sports more frequently will provide gender ratings that are closer to neutral or the feminine side of the scale.
4. Strength and gracefulness will have an impact on how masculine or feminine participants view sports on average.
5. Modern Sexism will predict participants' gender typing of sports – participants that score higher on the Modern Sexism scale will be more likely to rate sports overall as more masculine.

Methods

Overview

To examine the relationship between demographics, sports attitude and behavior, political affiliation, Modern Sexism, and gender typing of sports, I utilized an online research survey conducted through Qualtrics.

Participants

Participants were recruited from both Amazon Mechanical Turk (Amazon MTurk) and Hunter College. Participants recruited from Amazon MTurk were compensated $.75 USD for their participation and participants recruited from Hunter College were granted compensation in the form of a class credit (1.0 credit hour total). Data from participants were collected across one 10-minute online survey. The final sample consisted of 188 participants, 92 Hunter students and 96 MTurk participants. Eleven outliers were excluded from the sample due to response bias and four participants were excluded due to incomplete survey results. Fifty four percent of participants were male and 46% were female. The average age of the whole sample was 30 with a standard deviation of 13.4. The average age of the Hunter sample was 21 whereas the average age of the MTurk sample was 38. Of the 188 participants, 23% self-reported as politically conservative, 27% as moderate, and 50% as liberal. Of the total sample, 48% identified as White, 14% identified as Black or African American, 1.6% as American Indian or Alaska Native, 20% as Asian and 19% as Latino/Hispanic. There were 3.7% of respondents who identified as Other.

Procedure and Materials (see appendix)

All participants (Hunter and MTurk) completed a 10-minute online survey administered via Qualtrics. Prior to completing the survey, participants were presented with informed consent forms that contained information about the procedure, benefits and risks of participation, an explanation of how to acquire the results of the research, voluntary participation information, and

the researchers' contact information. Participants were told the purpose of the study was to examine people's attitudes towards certain team and individual sports. After consenting to participate, participants provided rates of gender-typing for 20 sports (10 group and 10 individual sports). The survey also asked participants the extent to which each of these sports requires strength, strategy, hand-eye coordination, gracefulness, and composure. Participants were then asked about sports consumption, what sports they watch and how often, as well as sports participation, what sports they play and how often, and whether or not they defined themselves as an athlete at some point in their lives. Lastly, the survey asked participants to report their political beliefs and complete the Modern Sexism scale. Participants also reported demographic information, including age, gender, and race/ethnicity. At the conclusion of the survey, participants were given instructions on how to redeem their compensation.

Measures

Gender-Typing

To assess gender-typing of the 20 sports of interest in this study, respondents were asked to rate each sport on a 0 (very feminine) to 100 (very masculine) slider scale, with 50 marked neutral. The numbers did not appear on the scale. The following instructions were presented: *We have listed here a series of different group sports. Please take a minute to think about each group sport, then rate each one on a scale that goes from very feminine to very masculine. You may think some group sports are very feminine, some very masculine, and some in between to different degrees. Please feel free to use either extreme or any point between. If you are unsure, you can also select "don't know."* The same instructions were given for individual sports as well. The 20 sports chosen (see Table 1) were chosen to represent a range of sports that have been shown to be either masculine-typed, feminine-typed, or neutral-typed in previous research by

Metheny (1965), Koivula (2001), and Hardin and Greer (2008). Group and individual sports were counter-balanced. Within each group, sports were listed in the same order across participants.

Sports Characteristics

Ten group sports and ten individual sports were combined into one list, which was presented similarly to each participant. To assess characteristics of sports to see if they aligned with previous research by Metheny (1965) and Kouivulu (2001), participants were presented with a trait and asked the extent to which the trait is required to play that sport. Five characteristics were included in the survey: *physical strength*, *hand-eye coordination*, *strategy*, *composure*, and *gracefulness*. Participants rated each sport on a slider scale ranging from 0 to 100, with 0 indicating none of that characteristic is required and 100 indicating the maximum characteristic is required. The following instruction was given for each characteristic: *For each sport below, how much* ***<characteristic>*** *is required to play that sport? You might think that very little <****characteristic****> is required to play the sport or that maximum <****characteristic****> is required. Set the slider accordingly. You can select "don't know" if you are unsure.*

Sports fandom, consumption, and participation

Ten group sports and ten individual sports were combined into one list, which was presented similarly to each participant. To assess participants' interest in sports, subjects answered questions about their interest in each of the 20 sports using a 5-point Likert scale: 1 = very interested, 2 = somewhat interested, 3 = a little bit interested, 4 = not at all interested, and 5 = not aware of it. To assess the amount of time participants spent consuming each of the sports, they were asked to answer questions about their time consuming each of the team and individual sports. Responses included: at least once a week, once a month, a few times a year, and I do not

watch this sport. Lastly, to assess respondents' participation with sports, they were asked how often they participate in each of the 20 sports. Similar to consumption, participants answered on a scale of at least once a week, once a month, a few times a year, and I do not play this sport. A composite sports engagement score was calculated by averaging participant's sports fandom, consumption and participation scores.

Modern Sexism

To measure participants' Modern Sexism, they were asked how much they agreed or disagreed with eight statements from the Modern Sexism scale (Swim et al., 1995**).** Some example statements from the Modern Sexism scale include: *Discrimination against women is no longer a problem in the United States* and *It is rare to see women treated in a sexist manner on television.* The eight statements were measured using a 7-point Likert Scale ranging from Strongly Disagree to Strongly Agree. Before items were averaged, 3 items were reverse scored so that, for all items, higher values indicated higher endorsements of Modern Sexism beliefs.

Political Affiliation

To assess participants' political affiliation, participants were asked *how would you describe your political beliefs*. They responded either very conservative, somewhat conservative, moderate, somewhat liberal, and very liberal. To analyze results, I grouped the responses into three categories: conservative, moderate, and liberal. Very conservative and somewhat conservative respondents were put into the conservative group and very liberal and somewhat liberal were included in the liberal group.

Results

Masculine-Feminine Rating

On average, participants perceived sports as slightly masculine (M = 58.2, SD = 7.6). Football was the most masculine sport (M = 83.3, SD = 20.1) followed by Boxing (M = 77.7, SD = 18.1), Rugby (M = 76.3, SD = 20.5), and Ice Hockey (M = 74.4, SD = 19.4). The most feminine sports were Gymnastics (M = 32.5, SD = 23.0), Softball (M = 34.0, SD = 24.0), Volleyball (M = 37.7, SD = 20.5), and Tennis (M = 47.3, SD = 15.0). The full list of sports can be found in Table 1. I conducted an independent samples t-test to test whether group sports were rated as more masculine than individual sports. Although group sports were numerically rated as more masculine (M = 62.3, SD = 19.1) than individual sports (M = 54.0, SD = 15.1), this difference was not significant ($t(18) = 1.31$ p =.10).

Overall, men rated sports as more masculine than women did for 15 out of 20 sports, with one tie (exact sign test, $p < .01$). An independent samples t-test showed there was a significant effect of sex of participant (male M = 59.3, SD = 7.81; female M = 57.0, SD = 6.80, $t(183) = 2.11$, p = .018).

Table 1. Gender-typing of sport among Hunter College students and Amazon MTurk respondents

Sports	Overall M	Overall SD	Male M (SD)	Female M (SD)
Football	83.3	20.1	85.4 (19.0)	80.7 (21.1)
Boxing	77.7	18.1	80.6 (17.4)	74.3 (18.3)
Rugby	76.3	20.5	78.8 (21.3)	73.4 (19.3)
Ice Hockey	74.4	19.4	75.5 (19.5)	73.1 (19.3)
Baseball	72.7	19.4	74.5 (17.7)	70.6 (21.0)
Basketball	65.3	15.7	67.9 (16.8)	62.3 (13.7)
Cricket	62.6	17.2	60.2 (17.9)	65.2 (16.1)
Golf	62.2	16.0	62.9 (16.9)	61.5 (14.9)
Soccer	59.9	16.0	61.7 (16.8)	57.7 (15.0)
Fencing	56.8	14.1	58.2 (12.8)	55.0 (15.6)
Lacrosse	56.7	19.2	56.4 (20.5)	57.0 (17.7)
Bowling	55.9	13.9	57.0 (14.4)	54.6 (13.3)
Archery	54.1	14.0	53.5 (15.0)	54.8 (12.7)
Skiing	53.0	12.4	53.0 (13.5)	53.0 (11.1)
Track and Field	52.1	12.2	53.6 (12.1)	50.3 (12.1)

Swimming	49.4	13.2	51.0 (12.8)	47.4 (13.5)
Tennis	47.3	15.0	49.2 (14.1)	45.1 (15.9)
Volleyball	37.7	20.5	40.3 (20.9)	34.7 (19.6)
Softball	34.0	24.0	33.4 (25.7)	34.7 (21.9)
Gymnastics	32.5	23.0	33.3 (22.6)	31.6 (23.5)

Note. *SD* = standard deviation..

Regression Models

Correlations and linear regression analyses were conducted to examine the relationship between overall gender ratings and various potential predictors. We ran a linear regression to analyze which, if any, variables had a significant impact on how participants rated sports on average in terms of gender. Strength and Modern Sexism were mean-centered. Gender and sample were both nominal variables - males were coded as 1 and females as 2. The Hunter sample was coded as 1 and the MTurk sample was coded as 2. We first included all potential predictors in the model. The regression model with all predictors was reduced by backward elimination, first, of non-significant interactions and then of predictors that were not themselves significant and did not interact significantly with any other predictors. The non-significant predictors included age, average gracefulness, average hand-eye coordination, average composure, and average strategy, as well as political affiliation and average sports engagement score.

Table 2 summarizes the descriptive statistics and Table 3 includes the regression analysis results. Overall, the model was significant (R^2 = .157, F(4,183) = 8.34 p <.001). Rated strength (β= .298, t = 4.30, p <.001) was a significant positive predictor of the gender typing of sports; the more strength that was required on average for sports, the more masculine on average sports were rated. Modern Sexism was also a significant positive predictor of gender-typing of sports

(β = *.179*, t = 2.47 p = .01); the higher participants scored on traits of Modern Sexism, the more likely on average they were to rate sports as masculine.

Sample source of the participant, whether they were from Hunter or Amazon MTurk (β = *.143*, t = 1.97 p = .051) was not a significant predictor of gender-typing of sports, despite the trend for participants from Amazon MTurk to numerically rate the sports more masculine overall. Neither sports engagement, nor ratings of hand-eye coordination, composure, strategy or gracefulness significantly predicted gender rating. Political affiliation also did not have an impact on gender-typing of sports. Gender of the participants also had no significant effect, despite the *t*-test showing that women rated sports as less masculine than men did.

Table 2. Descriptive Statistics

Variable	Mean	SD	Correlations 1	2	3	4
1. Avg_MascFem	58.2	7.4				
2. Avg_Strength	62.9	13.5	.254**			
3. Avg_ModernSexism	3.18	1.26	.215**	-0.09		
4. What is your gender?	1.46	0.5	-.154*	0.011	-0.128	
5. Sample(Hunter or MTurk)	1.51	0.5	.170*	-0.136	.299**	-0.123

Note: N=188. **p<.01

Table 3. Multiple Regression of Factors On Gender Typing of Sports.

	B	*Std. Error*	*Beta*	*t*	*Sig.*
(Constant)	57.599	2.38		24.25	<.001***
Avg_Strength	0.164	0.04	0.30	4.30	<.001***
Avg_ModernSexism	1.059	0.43	0.18	2.47	0.01**
What is your gender?	-1.734	1.04	-0.12	-1.68	0.10
Sample (Hunter or MTurk)	2.122	1.08	0.14	1.97	0.05

Note. Dependent variable = average masculine/feminine score.

Sports Attributes

Given the powerful impact of strength on how masculine and feminine sports were perceived, we looked at how each sport was rated in terms of how much strength is required in the sport. Table 4 highlights the average score of strength for each sport. Football requires the most strength (*M* = 83.1*; SD* = 19.6) followed by Boxing, Rugby, and Gymnastics. Given that there were differences between group sports and individual sports in terms of gender-typing, I conducted an independent *t*-test to see if there were significant differences in how much strength is required for group sports vs. individual sports. Results of the analysis showed that group sports on average appeared to require more strength (M = 65.7; SD = 20.8) than individual sports (M = 59.4; SD = 21.8), but this result was not significant (*t*(18)= 1.19, *p* =.13). A linear regression found no significant predictors for strength.

I also examined correlations between the five attributes of strength, hand-eye coordination, strategy, composure, and gracefulness, as shown in able 5. All five attributes were significantly positively correlated with each other. Strength, hand-eye, strategy, and composure were all positively correlated with an *r* between .62 and.72. Gracefulness was less strongly positively correlated with strength, hand-eye, strategy and composure, with r's between .42 and .50.

Table 4. How much Strength is Required for Each Sport?

Sport	**Mean**	**SD**
Football	83.1	19.6
Boxing	81.4	22.1
Rugby	75.8	23.4
Gymnastics	75.1	22.4
Ice Hockey	70.2	22.6
Swimming	70.0	21.1
Track and Field	68.4	20.4
Soccer	68.0	21.6
Basketball	67.5	20.4
Baseball	64.2	20.6
Volleyball	60.9	20.9
Lacrosse	59.8	19.6

Tennis	58.8	21.5
Skiing	58.1	21.7
Softball	56.5	19.6
Cricket	51.0	20.3
Fencing	49.6	22.3
Archery	48.5	21.5
Bowling	42.2	21.4
Golf	42.0	23.9

Table 5. Correlations between five attributes

	Mean	SD	1	2	3	4
1.Avg_Strength	62.90	13.50				
2.Avg_HandEye	68.92	14.44	.699**			
3.Avg_Strategy	65.67	16.28	.621**	.724**		
4. Avg_Comoposure	67.62	16.74	.609**	.723**	.710**	
5. Avg_Gracefulness	54.72	16.81	.445**	.424**	.445**	.500**

Note: N=188; **p<.01, *p<.05

Political Affiliation and Modern Sexism

A one-way ANOVA was performed to examine the effect of political affiliation on Modern Sexism. The results revealed that there was a statistically significant difference in Modern Sexism scores between those who self-reported that they were conservative, moderate, and liberal ($F(2,185) = 31.6$, $p < .001$). Participants who were conservative had the highest scores of Modern Sexism (M = 4.03; SD = 1.11), followed by moderates (M = 3.60; SD = 1.05), and then liberal (M = 2.57; SD = 1.11). While Modern Sexism was a significant positive predictor for masculine-feminine rating, political affiliation did not have a significant impact.

Discussion

Results from this study align with previous studies on gender-typing and sports showcasing that sports are viewed as primarily masculine. While the average score across the 20

sports in both group and individual sports was slightly higher than neutral (a value of 50 on the slider scale), the average scores were masculine. Even with the passing of Title IX and the success of women's teams and leagues such as Women's National Soccer Team and WNBA, people still perceive sports as a masculine activity. Similar to results from previous studies, on average, group sports had numerically higher masculinity ratings than individual sports, but the difference was not significant in the current study. Sports that involve close contact between opponents and physical force tend to be perceived as more masculine, since aggressiveness and physical contact are often classified as masculine traits (Metheny, 1965). This might be something that changes over time as more women are involved in sports that require close contact, like soccer, basketball and hockey. Over 30 years ago, there was no women's professional sports league for basketball or soccer – we could see a lot of change in the coming years with the increase in female sports leagues and participation.

Examining the results on a sport-by-sport basis, we see that a majority of sports were viewed as masculine, but there were a few that, unsurprisingly, were defined as feminine, such as gymnastics, softball, and volleyball. These results align with previous research on this topic, particularly Metheny's 1965 classification of sports. Additionally, gymnastics was the top sport that required gracefulness; it also, however, ranked high in terms of sports that required strength. This is interesting and future research should examine how the definition of strength might have changed since Metheny's original classification.

Overall, men and women see sports similarly; however, men do view sports as more masculine compared to women. While gender was not a significant predictor in the regression, the differences in how men and women define certain sports may be due to the fact that women have a somewhat lower modern sexism score compared to men. In our study, women had an

average MS of 3.0 compared to 3.3 for men. As we discuss later, Modern Sexism was a significant predictor of gender-typing for sports. For the most part, these findings were consistent with past studies that found respondents typing certain sports masculine, feminine, and neutral. Even in light of more liberal attitudes about women's sports participation, and women's participation in non-traditional gender roles, it seems not much has changed over the years. There is debate among researchers about whether stereotypes can change over time. Some psychologists believe that once a stereotype is formed, it is easily maintained and reinforced, making it hard to change a person's mind about a certain group of people (Cvencek et al., 2015).

People have beliefs about a group of people and then these beliefs are strengthened by observing information that confirms this belief. For example, if people believe that females are not good athletes or should not be playing sports, they often look for information that confirms this belief (Knoblock-Westerwick, 2015; Marquart, Matthes, & Rapp, 2016)– the media does a good job of reinforcing people's stereotypes particularly about women in sports (Cooky et al., 2021). Researchers in psychology have attempted to induce change by directly challenging people's beliefs that make up particular stereotypes. Studies have tested the impact of, for example, consciously suppressing stereotypes, receiving information that refutes them, or repeating counter stereotypical beliefs.

In meta-analyses that each included more than 400 experiments, Paluck, Porat, Clark, and Green, (2021) and Forscher et al. (2019) found little evidence of the efficacy of these and similar types of interventions in producing more than short-term reduction of stereotypes and associated prejudices. Results of this study align with previous research that stereotypes are stable over time (Haines et al., 2016) – that despite societal changes, many aspects of traditional gender stereotypes still endure. There were a few results that provided a pocket of hope that stereotypes

about women are potentially changing, including tennis, which was rated slightly more feminine among participants. In recent years, female tennis players, such as Coco Gauff, Naomi Osaka, and Serena Williams, have become popular on social media. More research needs to be done in this area, but these results could indicate that having a female role model in a sport and using media, in this instance, social media, to expose people to those female athletes, could have an impact on how a sport is perceived.

Sports engagement, including sports consumption, sports participation, and fandom did not significantly predict how masculine or feminine a sport is. One of the limitations of this study was that the survey asked about media habits and consumption but did not specify the gender of the sports people watched. For example, if someone says they watch basketball frequently, are they watching men's basketball or women's basketball? Previous studies which found consumption to predict gender-typing specified the gender of the athletes for the sports participants were watching. Future studies should ask more specific questions on media consumption to see how that affects gender typing of sports and also look to explore social media habits. Given that so many athletes are active on social media, it will be interesting to examine if social media has any impact on how people perceive sports.

Two of the major findings of this study were that strength and Modern Sexism significantly predicted how masculine or feminine sports on average are judged to be. This aligns with previous research, specifically Metheny's description of attributes that align with male sports, such as strength and competition. There was a lot of crossover between sports that were described as masculine (Football, Boxing, Rugby) and sports that required strength. Men are supposed to act with strength and be aggressive (Krane et al., 2004). Therefore, it makes sense that strength would have an impact on how participants rated sports on average in terms of

gender. Strength is a trait that is often assigned to men and not women. Specifically in the context of sports, strength is rarely if ever used to describe female athletes.

In addition to understanding the impact of participation, consumption, and interest on gender-typing of sports, this study also examined how political affiliation and Modern Sexism predicted gender-typing of sports. In 1995, researchers introduced a scale to uncover whether respondents believe that discrimination against women is ongoing. That Modern Sexism scale measures whether respondents express hostility towards women's push for equality, resent efforts made to help women overcome past discrimination, and/or resent women themselves for being too quick to claim something as sexist or ask for a favor based on their gender (Swim et al., 1995). Given that sports have been deemed appropriate for men and not women, it is interesting to see how Modern Sexism intersects with gender-typing of sports.

Results of this study indicated that Modern Sexism did significantly predict gender-typing scores; participants who scored higher on the Modern Sexism scale were more likely to rate sports on average as masculine. This aligns with my hypothesis and the previous research that showed gender role beliefs were a significant predictor of sports gender-typing (Xu et al., 2019). This also highlights how one's beliefs can be applied to many different aspects of a person's life – if you believe that women are supposed to be elegant and passive, you believe this in all aspects of their lives. In terms of sample, the MTurk sample had higher scores related to Modern Sexism (M = 3.6) compared to the Hunter sample (M = 2.8), and the MTurk sample was more conservative as well. This is probably why sample was not a predictor in the regression; MS score, a co-variate, was a more powerful predictor. Political affiliation did not have a significant impact on gender-typing scores, either; however, results of this study aligned with previous studies which found that there is a significant difference in Modern Sexism score

depending on political affiliation. Future research should continue to explore the intersection of Modern Sexism and political affiliation on sport perception.

While sample was not a significant predictor of gender-typing of sports, there was a strong trend (p=.051). Participants from MTurk tended to be more likely to rate sports as masculine compared to students from Hunter. Participants from MTurk were older (average age of 38 vs. 21 for Hunter) and also more likely to be male (60% MTurk compared to 47% for the Hunter sample). In addition to gender and age, the two samples also differed in terms of political affiliation – 42% of the MTurk sample self-reported as liberal compared to 59% of Hunter students. Only 9% of Hunter students reported as conservative compared to 37% of MTurk participants. The composition of the two samples may have had an impact on gender-typing of sports and future research should analyze the two samples further.

Limitations and Future Directions

In addition to the limitations already discussed, there were several others that should be noted. The study took place in May 2020, when much of the sports world was on pause due to the COVID-19 pandemic. While this might be a positive, given that seasonality of sports could play an impact, people's habits/participation could have been affected because of the lack of sports on TV and the COVID-19 pandemic causing team sport participation to stop. This study was also conducted prior to a female becoming the Vice President of the United States. It will be interesting to continue to monitor how the success of women in male dominated professions could potentially change the results. The results of the study focused on how sports are perceived and what factors influence gender typing of sports. Linear regressions and *t*-tests were primarily used to analyze the data, but future research should conduct multi-level models to get a more in-depth understanding of the results and how certain sports may be grouped together due to their

similar characteristics. Lastly, future research should look at the racial composition of the athletes for each sport and see how race plays a role in gender typing of sports. Research could explore how race interacts with perceptions of sports as gendered.

Conclusion

In the United States, there is a still a large discrepancy between male and female athletes and sports leagues in terms of pay, media coverage, and overall fan interest. Even after winning the World Cup in 2019, the US Women's National Team had to fight for equal pay to the men's team, equal training facilities and conditions, and equal respect. It was not until very recently that the Women successfully fought for and achieved equal pay. It has been reported (Bachman, 2019) that the Women's National Team brings in more revenue than the Men's team; however, this has no impact on how the Women's team is treated. Often times, the Women's team is asked to play on artificial turf fields which can be cause injury and damage to the muscles. The WNBA has to travel on public flights, often times arriving late to games or having to skip practice due to delays. Male sports teams on the other hand, charter their own flights and have the best conditions to play games and practice. From this research and previous studies, it is clear that society still views sports as primarily a male activity, especially team sports. From a young age, boys are taught to be strong and independent, and to participate in physical activity, whereas girls are told to be submissive, quiet, and that physical activity is not for them.

Bandura (1986) suggests that with enough repetition of an activity by men or women, the "gendering " of that activity can be changed; however, Bandura suggests that media influence may be more powerful than lived experiences in the gendering of activities. While this study did not illustrate that media consumption impacted gender-typing of sports, future studies should look deeper at this question. And if this is the case, the media need to do a better job at

showcasing female athletes and female sports and talking about them in a way that is empowering and lifts women athletes up rather than reinforcing the male superiority dynamic in sports. A recently launched platform, called the Fan Project, aims to do just that. The goal of the Fan Project is to make women's sports more visible, because with more media coverage, female sports can potentially gain more interest, and potentially have an impact on how people perceive the appropriateness of female sports.

People may not watch or be interested in watching females play sports because this does not align with appropriate gender roles in our society. If this is the case, it is necessary to teach boys and girls at a young age that women can play sports and participate in athletic activities and these are activities that are appropriate for women. Expanding the role of sports in the lives of girls in the US could lead to more progressive ideas about what constitutes a gender-appropriate sport. Recently, the NFL and Nike announced a Girl Flag Football initiative for schools. With more initiatives aimed at introducing and getting girls to play sports at a young age, society could be more accepting of female athletes and female sports leagues. The hope is that in future years, results of a study like this would show more sports as neutral and show that it is acceptable for both men and women to participate in physical activity at all levels. Until then, we need to continue to elevate female athletes, highlight their successes, and talk about them on an equal playing field to men.

References

Alley, T. R., & Hicks, C. M. (2005). Peer attitudes towards adolescent participants in male- and female-orientated sports. *Adolescence, 40*(158), 273-280.

Anderson, E. (2005). Orthodox and inclusive masculinity: Competing masculinities among heterosexual men in a feminized terrain. *Sociological Perspectives, 48*(3), 337-355.

Anthrop, J. & Allison, M.T. (1983). Role conflict and the high school female athlete. *Research Quarterly,* 54. 104-111.

Bachman, R. (2019). U.S. women's soccer games outearned men's games. The Wall Street Journal. Retrieved November 2, 2021, from https://www.wsj.com/articles/u-s-womens-soccer-games-out-earned-mens-games-11560765600.

Bandura, A. (1986). Social foundations of thought and action. Upper Saddle River, NJ: Prentice Hall.

Bern, S. L. (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology*, 42, 155-162.

Bem, S. L. (1981). Gender schema theory: A cognitive account of sex typing. *Psychological Review,* 88, 354–364

Bemstein, A. (2002). Is it time for a victory lap? *International Review for the Sociology of* S/7ort57(fell-winter), 415-428.

Blinde, E. M., & Taub, D. E. (1992). Women athletes as falsely accused deviants: Managing the lesbian stigma. *The Sociological Quarterly, 33*(4), 521-533.

Bussey, K., & Bandura, A. (1999). Social cognitive theory of gender development and differentiation. *Psychological Review, 106*(4), 676–713

Chalabaev, A., Sarrazin, P., Fontayne, P., Boiché, J., & Clément-Guillotin, C. (2013). The influence of sex stereotypes and gender roles on participation and performance in sport and exercise: Review and future directions. *Psychology of sport and exercise*, 14(2), 136-144.

Clément-Guillotin, C., & Fontayne, P. (2011). Situational malleability of gender schema: The case of the competitive sport context. *Sex Roles*, 64, 426–439.

Cooky, C., Messner, M. A., & Musto, M. (2015). "it's dude time!" *Communication & Sport*, 3(3), 261–287. https://doi.org/10.1177/2167479515588761

Cooky, C., Council, L. T. D., Mears, M. A., & Messner, M. A. (2021). One and done: The long eclipse of women's televised sports, 1989–2019. *Communication & Sport*, 9(3), 347–371. https://doi.org/10.1177/21674795211003524

Eagly, A.H., & Steffen, V. J. (1984). Gender stereotypes stem from the distribution of women and men into social roles. *Journal of Personality and Social Psychology*, 46, 735-754.

Eagly, A. H., Nater, C., Miller, D. I., Kaufmann, M., & Sczesny, S. (2020). Gender stereotypes have changed: A cross-temporal meta-analysis of US public opinion polls from 1946 to 2018. *American psychologist*, 75(3), 301.

Eagly, A. H., & Koenig, A. M. (2021). The vicious cycle linking stereotypes and social roles. *Current Directions in Psychological Science*, 30(4), 343-350.

Forscher, P. S., Taylor, V. J., Cavagnaro, D., Lewis, N. A., Jr., Buchanan, E. M., Moshontz, H., Chartier, C. R. (2019). Stereotype threat in Black college students across many operationalizations. *Nature Human Behavior* https://doi.org/10.31234/osf.io/6hju9

Fiske, S. T., & Stevens, L. E. (1993). What's so special about sex? Gender stereotyping and discrimination. *Gender issues in contemporary society* (pp. 173–196).

Greer, J.& Jones, A. (2012). Beyond figure skating and hockey: How US audiences gender type Winter Olympic sports. *International Journal of Sport & Society*, 3, 129–140.

Haines, E. L., Deaux, K., and Lofaro, N. (2016). The times they are a-changing … or are they not? A comparison of gender stereotypes, 1983–2014. *Psychol. Women Q.* 40, 353–363. doi: 10.1177/0361684316634081

Hardin, M., & Greer, J. D. (2009). The influence of gender-role socialization, media use and sports participation on perceptions of gender-appropriate sports. *Journal of Sport Behavior*, 32, 207–226.

Hargreaves, J. (1994). *Sporting females: Critical issues in the history and sociology of women's sports.* London: Routledge

Hentschel, T., Heilman, M. E., & Peus, C. V. (2019). The multiple dimensions of gender stereotypes: A current look at men's and women's characterizations of others and themselves. *Frontiers in psychology*, *10*, 11.

Holland, A., & Andre, T. (1994). Athletic participation and the social status of adolescent males and females. *Youth & Society*, 25(3), 388–407.

Jones, A., & Greer, J. (2011). You don't look like an athlete: The effects of feminine appearance on audience perceptions of female athletes and women's sports. *Journal of Sport Behavior*, 34, 358–377.

Kaelberer, M. (2018). Gender Trouble on the German Soccer Field: Can the Growth of Women's Soccer Challenge Hegemonic Masculinity?. *Journal of Gender Studies*. 28. 10.1080/09589236.2018.1469973.

Knobloch-Westerwick, S. (2015). The selective attention self- and affect-management (SESAM) model: Applications in the realms of race, politics, and health. Communication Research, 42(7), 959– 985. doi:10.1177/0093650214539173

Krane, V., Choi, P. Y. L., Baird, S. M., Aimar, C. M., & Kauer, K. J. (2004). Living the paradox: Female athletes negotiate femininity and muscularity. *Sex Roles, 50,* 315-329.

Koivula, N. (1995). Ratings of gender appropriateness of sports participation: Effects of gender-based schematic processing. *Sex Roles,* 33, 543–557.

Koivula, N. (1999). Sport participation: Differences in motivation and actual participation due to gender typing. *Journal of Sport Behavior*, *22*(3), 360–380

Koivula, N. (2001). Perceived characteristics of sports categorized as gender-neutral, feminine and masculine. *Journal of Sport Behavior, 24,*377-393.

Lopiano, D. (2000). Modern history of women in sports: Twenty-five years of Title IX. *The Athletic Woman,* 19(2), 163–173.

Marsh, H. & Jackson, S (1986). Multidimensional self concepts, masculinity and femininity as a function of women's involvement in athletics. *Sex Roles*, 15, 391-415.

Martin, C. L., Ruble, D. N., & Szkrybalo, J. (2002). Cognitive theories of early gender development. Psychological bulletin, 128(6), 903–933. https://doi.org/10.1037/0033-2909.128.6.903

Marquart, F., Matthes, J., & Rapp, E. (2016). Selective Exposure in the Context of Political Advertising: A Behavioral Approach Using Eye-Tracking Methodology. *International Journal Of Communication, 10,* 20. Retrieved from https://ijoc.org/index.php/ijoc/article/view/4415

Matteo, S. (1986). The effects of gender-schematic processing on decisions about sex-inappropriate sport behavior. *Sex Roles,* 15, 417–432.

Matteo, S. (1988). The effect of gender-schematic processing on decisions about sex-inappropriate sport behavior. *Sex Roles*, 18, 4-1-58.

Messner, M. A. (1988). Sports and male domination: The female athlete as contested ideological terrain. *Sociology of Sport Journal*, 5, 197–211.

Messner, M. (2002). Taking the field: Women, men. and sports. Minneapolis: University of Minnesota Press.

Metheny, E. (1965). Connotations of movement in sport and dance. Dubuque, IA: Wm. C. Brown.

Musto, M., Cooky, C., & Messner, M. A. (2017). "From Fizzle to Sizzle!" Televised sports news and the production of gender-bland sexism. *Gender & Society*, 31(5), 573-596.

Nielsen Media Research (2020). https://www.nielsen.com/us/en/

Paluck, E. L., Porat, R., Clark, C. S., & Green, D. P. (2021). Prejudice reduction: Progress and challenges. *Annual Review of Psychology*, 72(1), 533–560. https://doi.org/10.1146/annurev-psych-071620-030619

Participation in High School Sports Registers First Decline in 30 Years (Rep.). (2019). Retrieved https://www.nfhs.org/articles/participation-in-high-school-sports-registers-first-decline-in-30-years/

Pedersen, P. M. (2002). Investigating interscholastic equity on tiie sports page: A content analysis of high school athletics newspaper articles. *Sociology of Sport Journal. 19,* 41M32.

Peus, C., Braun, S., & Knipfer, K. (2015). On becoming a leader in Asia and America: Empirical evidence from women managers. *The Leadership Quarterly*, *26*(1), 55–67. https://doi.org/10.1016/j.leaqua.2014.08.004

Plaza, M., Boiché, J., Brunel, L., & Ruchaud, F. (2017). Sport= male… But not all sports: Investigating the gender stereotypes of sport activities at the explicit and implicit levels. *Sex Roles*, 76(3-4), 202-217.

Prentice, A., & Carranza, E. (2002). What women and men should be, shouldn't be, are allowed to be, and don't have to be: The contents of prescriptive gender stereotypes. *Psychology of women quarterly*, *26*(4), 269-281.

Riemer, B. A., & Visio, M. E. (2003). Gender typing of sports: An investigation of Metheny's classification. *Research Quarterly for Exercise and Sport*, 74(2), 193-204.

Ross, S. R., & Shinew, K.J. (2008). Perspectives of women college athletes on sport and gender. *Sex Roles, 58*, 40-57.

Rudman L. A., Moss-Racusin C. A., Glick P., Phelan J. E. (2012a). Reactions to vanguards: advances in backlash theory, in *Advances in Experimental Social Psychology Vol. 45*, eds Devine P., Plant A. (London: Elsevier;), 167–227

Sainz-de-Baranda, C., Adá-Lameiras, A., & Blanco-Ruiz, M. (2020). Gender differences in sports news coverage on Twitter. *International Journal of Environmental Research and Public Health*, 17(14), 5199.

Sherrow, V. (1996). Encyclopedia of Women and Sports. ABC-CLIO.

Shot Clock. (2021). Shot Clock. https://linktr.ee/shotclock_media

Schmalz, D. and Kerstetter, D. (2006). Girlie girls and manly men: Children's stigma consciousness of gender in sports and physical activities. *Journal of Leisure Research*, 38(4), 536-557.

Scheadler, T, Wagstaff, A (2018) Exposure to women's sports: Changing attitudes toward female athletes. *The Sport Journal* 19: 1–17.

Sobal, J., & Milgrim, M. (2019). Gendertyping sports: social representations of masculine, feminine, and neither-gendered sports among US university students. *Journal of Gender Studies*, 28(1), 29-44.

Snyder, E.E. & Kivlin, J.E. (1977). Perceptions of the sex role among female athletes and nonathletes. *Adolescence*, 12, 23-29.

Strupp, J. (2021, March 10). Visualizing the gap. Medium. Retrieved October 6, 2021, from https://medium.com/nightingale/visualizing-the-gap-eccb912d75e2.

Swim, J. K., Aikin, K. J., Hall, W. S., & Hunter, B. A. (1995). Sexism and racism: Old-fashioned and modern prejudices. *Journal of Personality and Social Psychology*, 68(2), 199-214

Swim, J. K., & Cohen, L. L. (1997). Overt, Covert, And Subtle Sexism: A Comparison Between the Attitudes Toward Women and Modern Sexism Scales. *Psychology of Women Quarterly*, 21(1), 103–118.

Teen Sport In America: Why Participation Matters (Rep.). (2018, January). Retrieved from https://www.womenssportsfoundation.org/

Valian, V. (September/October 1998). Sex, schemas, and success: what's keeping women back? Academe, 84, 50-55.

Xu, Q., Fan, M., & Brown, K. A. (2019). Men's sports or women's sports?: Gender norms, sports participation, and media consumption as predictors of sports gender typing in China. *Communication & Sport*, 9(2), 264–286. https://doi.org/10.1177/2167479519860209

Acknowledgments

I would like to thank Dr. Virginia Valian for her advice and guidance as I put together the design, analysis, and writing of this project. In addition, I would like to thank Maya Godbole for her mentorship throughout this process from the beginning brainstorm phases to the final research paper. I would also like to thank Dr. Martin Chodorow for all of his help with the results and analysis and Dr. Sandeep Prasada for being a part of my committee. Lastly, I would like to thank Hunter College and students in the M.A Psychology program for their support and helpful comments related to this project.

Appendix

Qualtrics Survey

Start of Block: Intro Message

Q20 Thank you for your interest in participating! We are interested in hearing your opinions about various group and individual sports. We anticipate your participation will take approximately 10 minutes. The next page will contain a consent form for participation. Please review the next page and click forward to the survey if you wish to proceed.

End of Block: Intro Message

Start of Block: Consent Form

Q21 THE CITY UNIVERSITY OF NEW YORK Hunter CollegeDepartment of Psychology CONSENT TO PARTICIPATE IN A RESEARCH STUDY Title of Research Study: Evaluation of Sports
Principal Investigator: Nicki Zenker, M.A Student
Faculty Advisor: Dr. Virginia Valian, Distinguished Professor You are being asked to participate in a research study because you are registered as a worker on Amazon Mechanical Turk, currently residing in the U.S., and at least 18 years of age. Purpose: The purpose of this research study is to examine how people perceive different sports. Approximately 200 people will participate in this study.

Key Information: •Your consent is being sought for research purposes and participation is completely voluntary.
•We anticipate your participation will take approximately 10 minutes in total. During the study, you will shown different sports and asked your perception of the sports. You will also be asked about your own sports consumption and participation habits.
•The foreseeable risks of participation in this study are minimal. Some participants may become uncomfortable answering questions about these topics. You may skip any questions that make you uncomfortable and you may withdraw from this study at any time.
•Your participation in this online survey involves risks similar to a person's everyday use of the Internet, and confidentiality will be maintained to the degree permitted by the technology used.
•You will not directly benefit from this study, however, your participation will help us understand some of the factors that we are interested in.
•You can choose to not participate.
Procedures:If you volunteer to participate in this research study, we will ask you to do the following: First, you will be given a list of 20 sports (10 team sports and 10 individual sports) and asked to rate each sport on a scale of 0 (very feminine) to 100 (very masculine). Afterwards you will be asked specific questions about your sports consumption and participation habits, as well as your political orientation and opinions on certain statements regarding gender equality.
All of these procedures will take place online via host-website Qualtrics during the duration of the survey.
Time Commitment: Your participation in this research study is expected to last for a total of 10 to 15 minutes Potential Risks or Discomforts: The foreseeable risks of participation in this study are minimal. During the online survey, some participants may become uncomfortable answering questions about themselves or about the topics that we are interested in. To minimize these risks, you may skip any questions that make you uncomfortable and you may withdraw from this study at any time. Your participation in this online survey involves risks similar to a person's everyday use of the Internet, and confidentiality will be maintained to the degree permitted by the technology used. Potential Benefits: You will not directly benefit from your participation in this research study. The potential benefits to society are a greater understanding of how people define and perceive specific sports and how that impacts both female and male sports leagues today.
Payment for Participation: You will receive $1.00 USD credited to your Mechanical Turk account for your participation this study. In order to receive payment, you must enter the code provided at the end of the survey into the Mechanical Turk HIT. Researchers will credit your account within 24 hours of your completion of the study.
New Information: You will be notified about any new information regarding this study that may affect your willingness to participate in a timely manner. Confidentiality: We will make our best efforts to maintain confidentiality of any information that is collected during this research study, and that can identify you. We will disclose this information only with your permission or as required by law. We will protect your confidentiality by keeping your data confidential. Data will be collected in a password protected Qualtrics account, only accessible by the PI. During analysis, the data will be downloaded and stored without identifying information. We will remove your MTurk ID number from your data; therefore, there will be no direct link connecting your account ID with your data. Data will be protected by securely storing the data in a file on a password protected computer, in secure areas, only accessible by the Principal Investigator. The research team, authorized CUNY staff, and government agencies that oversee this type of research may have access to research data and records in order to monitor the research. Research records provided to authorized, non-CUNY individuals will not contain identifiable information about you. Publications and/or presentations that result from this study will not identify you by name. Data will not be stored or distributed for future research studies.
Participants' Rights: •Your participation in this research study is entirely voluntary. If you decide not to participate, there will be no penalty to you, and you will not lose any benefits to which you are otherwise entitled. •You can decide to withdraw your consent and stop participating in the research at any time, without any penalty. Questions, Comments or Concerns: If you have any questions, comments or concerns about the research, you can talk to one of the following researchers: •Nicki Zenker (PI) Nicole.zenker40@myhunter.cuny.edu
If you have questions about your rights as a research participant, or you have comments or concerns that you would like to discuss with someone other than the researchers, please call the CUNY Research Compliance Administrator at 646-664-8918 or email HRPP@cuny.edu. Alternatively, you may write to: CUNY Office of the Vice Chancellor for Research Attn: Research Compliance Administrator 205 East 42nd Street New York, NY 10017 Signature of Participant: If you agree to participate in this research study, please click the button indicating your consent below. You may obtain a printed copy of this form by using the Print button in your browser.

Q22 Clicking below confirms that you are at least 18 years old. Additionally, this serves as your consent to participate.

- I consent to participate. (1)
- I do NOT consent to participate. (2)

End of Block: Consent Form

Start of Block: Group Sport Gender Ratings

Q1 We have listed here a series of different group sports. Please take a minute to think about each group sport, then rate each one on a scale that goes from very feminine to very masculine. You may think some group sports are very feminine, some very masculine, and some in between to different degrees. Please feel free to use either extreme or any point between. If you are unsure, you can also select "don't know."

	Very Feminine	Equally feminine and masculine	Very Masculine	Don't Know
Basketball ()				
Soccer ()				
Volleyball ()				
Ice Hockey ()				
Lacrosse ()				
Softball ()				
Baseball ()				
Rugby ()				
Cricket ()				
Football ()				

End of Block: Group Sport Gender Ratings

Start of Block: Individual Sport Gender Ratings

Q17 Now, you will rate a series of individual sports. Although some of these sports can be group sports, please focus on them as individual sports. Rate each individual sport below on a scale of very feminine to very masculine.

	Very Feminine	Equally feminine and masculine	Very Masculine	Don't Know

Golf ()	
Tennis ()	
Bowling ()	
Swimming ()	
Track and Field ()	
Skiing ()	
Gymnastics ()	
Boxing ()	
Archery ()	
Fencing ()	

End of Block: Individual Sport Gender Ratings

Start of Block: Sports Requirement - Physical Strength

Q18 For each sport below, how much **physical strength** is required to play that sport? You might think that very little physical strength is required to play the sport or that maximum physical strength is required. Set the slider accordingly. You can select "don't know" if you are unsure.

None Maximum Don't Know

Basketball ()	
Soccer ()	
Volleyball ()	
Ice Hockey ()	
Football ()	
Baseball ()	
Softball ()	
Lacrosse ()	
Rugby ()	
Cricket ()	
Golf ()	
Bowling ()	
Tennis ()	
Swimming ()	
Track and Field ()	
Skiing ()	
Boxing ()	
Gymnastics ()	
Archery ()	
Fencing ()	

End of Block: Sports Requirement - Physical Strength

Start of Block: Sports Requirement - Hand-Eye

Q24 For each sport below, how much hand-eye coordination is required to play that sport? You can select "don't know" if you are unsure.

	None — Maximum — Don't Know
Basketball ()	
Soccer ()	
Volleyball ()	
Ice Hockey ()	
Football ()	
Baseball ()	
Softball ()	
Lacrosse ()	
Rugby ()	
Cricket ()	
Golf ()	
Bowling ()	
Tennis ()	
Swimming ()	
Track and Field ()	
Skiing ()	
Boxing ()	
Gymnastics ()	
Archery ()	
Fencing ()	

End of Block: Sports Requirement - Hand-Eye

Start of Block: Sports Requirement -Strategy

Q23 For each sport below, how much strategy is required to play that sport? You can select "don't know" if you are unsure.

	None	Maximum	Don't Know

Basketball ()	
Soccer ()	
Volleyball ()	
Ice Hockey ()	
Football ()	
Baseball ()	
Softball ()	
Lacrosse ()	
Rugby ()	
Cricket ()	
Golf ()	
Bowling ()	
Tennis ()	
Swimming ()	
Track and Field ()	
Skiing ()	
Boxing ()	
Gymnastics ()	
Archery ()	
Fencing ()	

End of Block: Sports Requirement -Strategy

Start of Block: Sports Requirement - Composure

Q25 For each sport below, how much **composure** is required to play that sport? You can select "don't know" if you are unsure.

	None — Maximum — Don't Know
Basketball ()	
Soccer ()	
Volleyball ()	
Ice Hockey ()	
Football ()	
Baseball ()	
Softball ()	
Lacrosse ()	
Rugby ()	
Cricket ()	
Golf ()	
Bowling ()	
Tennis ()	
Swimming ()	
Track and Field ()	
Skiing ()	
Boxing ()	
Gymnastics ()	
Archery ()	
Fencing ()	

End of Block: Sports Requirement - Composure

Start of Block: Sports Requirement - Gracefulness

Q26 For each sport below, how much gracefulness is required to play that sport? You can select "don't know" if you are unsure.

	None	Maximum	Don't Know

Basketball ()	
Soccer ()	
Volleyball ()	
Ice Hockey ()	
Football ()	
Baseball ()	
Softball ()	
Lacrosse ()	
Rugby ()	
Cricket ()	
Golf ()	
Bowling ()	
Tennis ()	
Swimming ()	
Track and Field ()	
Skiing ()	
Boxing ()	
Gymnastics ()	
Archery ()	
Fencing ()	

End of Block: Sports Requirement - Gracefulness

Start of Block: Sports Fandom

Q31 How would you describe your interest in each of the following sports?

	Very Interested (1)	Somewhat Interested (2)	A Little Bit Interested (3)	Not At All Interested (4)	Not Aware Of It (5)
Basketball (1)	○	○	○	○	○
Soccer (2)	○	○	○	○	○
Volleyball (3)	○	○	○	○	○
Ice Hockey (4)	○	○	○	○	○
Football (5)	○	○	○	○	○
Baseball (6)	○	○	○	○	○
Softball (7)	○	○	○	○	○
Lacrosse (8)	○	○	○	○	○
Rugby (9)	○	○	○	○	○
Cricket (10)	○	○	○	○	○
Golf (11)	○	○	○	○	○
Bowling (12)	○	○	○	○	○
Tennis (13)	○	○	○	○	○
Swimming (14)	○	○	○	○	○
Track and Field (15)	○	○	○	○	○
Skiing (16)	○	○	○	○	○

Boxing (17)	○	○	○	○	○
Gymnastics (18)	○	○	○	○	○
Archery (19)	○	○	○	○	○
Fencing (20)	○	○	○	○	○

End of Block: Sports Fandom

Start of Block: Sports Consumption and Participation

Q3 How often do you watch each of the sports below, either on TV or through a streaming device/platform?

	At least once a week (1)	Once a month (2)	A few times a year (3)	I do not watch this sport (4)
Basketball (1)	○	○	○	○
Soccer (2)	○	○	○	○
Volleyball (3)	○	○	○	○
Ice Hockey (4)	○	○	○	○
Football (5)	○	○	○	○
Baseball (6)	○	○	○	○
Softball (7)	○	○	○	○
Lacrosse (8)	○	○	○	○
Rugby (9)	○	○	○	○
Cricket (10)	○	○	○	○
Golf (11)	○	○	○	○
Bowling (12)	○	○	○	○
Tennis (13)	○	○	○	○
Swimming (14)	○	○	○	○
Track and Field (15)	○	○	○	○
Skiing (16)	○	○	○	○
Boxing (17)	○	○	○	○

Gymnastics (18)	○	○	○	○
Archery (19)	○	○	○	○
Fencing (20)	○	○	○	○

Q27 How often do you participate in each of the sports below? This can include participating in recreational activities as well as participating in an organized league (i.e., playing on an intramural basketball team at college). For the purposes of this question, Track and Field can include running and jogging.

	At least once a week (1)	Once a month (2)	A few times a year (3)	I do not play this sport (4)
Basketball (1)	○	○	○	○
Soccer (2)	○	○	○	○
Volleyball (3)	○	○	○	○
Ice Hockey (4)	○	○	○	○
Football (5)	○	○	○	○
Baseball (6)	○	○	○	○
Softball (7)	○	○	○	○
Lacrosse (8)	○	○	○	○
Rugby (9)	○	○	○	○
Cricket (10)	○	○	○	○
Golf (11)	○	○	○	○
Bowling (12)	○	○	○	○
Tennis (13)	○	○	○	○
Swimming (14)	○	○	○	○
Track and Field (15)	○	○	○	○
Skiing (16)	○	○	○	○
Boxing (17)	○	○	○	○

Gymnastics (18)	○	○	○	○
Archery (19)	○	○	○	○
Fencing (20)	○	○	○	○

End of Block: Sports Consumption and Participation

Start of Block: Modern Sexism

Q9 How much do you agree or disagree with the following statements:

	Disagree Strongly (1)	Disagree Somewhat (2)	Disagree Slightly (3)	Neither Agree Nor Disagree (4)	Agree Slightly (5)	Agree Somewhat (8)	Agree Strongly (10)
Discrimination against women is no longer a problem in the united states (1)	○	○	○	○	○	○	○
Women often miss out on good jobs due to sexual discrimination (2)	○	○	○	○	○	○	○
It is rare to see women treated in a sexist manner on television (3)	○	○	○	○	○	○	○
On average, people in our society treat husbands and wives equally (4)	○	○	○	○	○	○	○
Society has reached the point where women and men have equal opportunities for achievement (5)	○	○	○	○	○	○	○
It is easy to understand the anger of women's groups in America (6)	○	○	○	○	○	○	○
It is easy to understand why women's groups are still concerned about societal limitations of women's opportunities (7)	○	○	○	○	○	○	○

Over the past few years, the government and news media have been showing more concern about the treatment of women than is warranted by women's actual experiences (8)	○	○	○	○	○	○	○

End of Block: Modern Sexism

Start of Block: Demographics

Q7 Was there a time when you defined yourself as an athlete?

- ○ Yes (1)
- ○ No (2)
- ○ Don't know (3)

Display This Question:

If Was there a time when you defined yourself as an athlete? = Yes

Q32 How many sports would you say you have participated in after the age of 18? Again, this can include participating in recreational activities (i.e., running or jogging) as well as participating in an organized league (i.e., playing on an intramural basketball team at college).

- ○ 1-3 (1)
- ○ 4-6 (2)
- ○ 7+ (3)
- ○ Don't Know (4)

Q10 What is your gender?

- ○ Male (1)
- ○ Female (2)
- ○ MTF (male to female) (3)
- ○ FTM (female to male) (4)
- ○ Other (5)

Q11 What is your age? (in years)

_____

Q12 What is your race or ethnicity? Select all that apply.

- ☐ White (1)
- ☐ Black or African American (2)
- ☐ American Indian or Alaska Native (3)
- ☐ Asian (4)
- ☐ Latino/Hispanic (5)
- ☐ Native Hawaiian or Pacific Islander (6)
- ☐ Other (7)

Q8 How would you describe your political beliefs?

- Very Conservative (1)
- Somewhat Conservative (2)
- Moderate (3)
- Somewhat Liberal (4)
- Very Liberal (5)

End of Block: Demographics