GOT BALLS? EXAMINING THE ASSOCIATION BETWEEN SPORTS FANDOM AND HEGEMONIC MASCULINITY

by

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Abstract

This research explores the role of the Big 4 sports leagues (NBA: National Basketball Association, MLB: Major League Baseball, NHL: National Hockey League and NFL: National Football League) in the reproduction of hegemonic masculinity in North America. It has been argued that sports reinforce damaging and oppressive masculine values. Few studies, however, examine the extent of this phenomenon. A quantitative methodology is employed to examine the extent of the association between sports fandom and the propensity for North American hegemonic masculinity. This study shows that sports fandom is positively associated with hegemonic masculinity. However, when controlling for demographic and other external variables, the association only remains significant for high intensity fans. This research sheds light on the complexity of the association between sports fandom and hegemonic masculinity, and asserts that this association is more selective than it appears. The implications of this study include exploring how and why there is a positive association between high intensity sports fans and hegemonic masculinity; the potential contribution of the Big 4 sports leagues to what Connell (2003) terms a ‘global gender order’; and the broad social consequences of hegemonic masculinity beyond sport. Finally, the implications segue into the task of developing campaigns to halt and reverse the spread of hegemonic masculinity.
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**Introduction: It’s a Man’s Game**

The all-time great middle linebacker Ray Lewis once said: “boy, it’s a man’s game, get off the field!” (Gehrig & Sabol, 2008), implying that the gridiron is reserved exclusively for a certain type of man. This research project aims to explore the extent to which sports foster hegemonic masculinity in North America. Specifically, it asks whether hegemonic masculine values ingrained in certain sports are transmitted to fans, seeping into their attitudes and actions and thereby shaping social and gender norms. This research fits within the subfield of gender and men’s studies. As the research centres on the role of sports in the construction, reproduction and maintenance of hegemonic masculinity, the research also falls within the scope of the sociology of sport.

The research question is: To what extent does men’s support of, association, identification, and fan involvement with the Big 4 sports leagues (National Basketball Association: NBA, National Hockey League: NHL, National Football League: NFL, and Major League Baseball: MLB) foster hegemonic masculinity? The goal of this thesis is to determine the degree of association between Big 4 sports fandom and the propensity for hegemonic masculinity. In order to answer the research question, three sub-questions are examined. First: is there an association between frequency of engagement in sports fan practices and hegemonic masculinity? Second: is there an association between any engagement in sports fan practices and hegemonic masculinity? Third: is there an association between frequency of sports fan practices or any engagement in sports fan practices and hegemonic masculinity while controlling for external variables (discussed in the methods section)?

The hypothesis is that there will be a positive association between self-reported degree of sports fandom (the independent variable) and support for hegemonic masculinity (the dependent
variable). A quantitative methodology is used to answer the research questions, and is discussed at length in the methods section. This study draws from Connell’s concept of hegemonic masculinity, and from the related literature that expands on the concept and offers a theoretical framework for operationalization. This research focuses exclusively on the Big 4 sports leagues – any reference to sports is solely directed towards these four leagues and their respective sports.

There are several reasons for focusing this research on the Big 4. The Big 4 represent the highest level of play for their respective sports and are based in North America. Although the NFL does not have a Canadian franchise, the NBA, NHL and MLB do, and all of the leagues in the Big 4 are prominent in Canadian popular culture. The Big 4 reach hundreds of millions of men, permeating into numerous streams of popular culture, including music, marketing, movies and fashion. Peripheral sports, such as swimming or volleyball, are prominent in neither the media nor popular culture – which is why they are not included in this research. Moreover, it is necessary to limit the study to specific leagues because of variation in how a sport and its athletes are depicted at different levels (e.g. children, high school, collegiate and professional). I have chosen to omit soccer from this study because the premier soccer players do not play in North America, and soccer lacks some of the key elements of North American mainstream sport culture, such as cheerleaders. Moreover, soccer is not as popular as the Big 4 sports in North America and this is a North American study.

Two main arguments justify the social significance of this research. The first is that it is of critical concern to understand the global gender order. Connell (2003) argues that furthering the understanding of men and masculinities will require research on the relationships and arenas beyond individual countries and regions that interconnect regimes of gender on a world scale. American football is not a global sport; however, the NFL is attempting to make it one, with
three regular season games being played abroad during the 2014-2015 season alone.
Furthermore, the MLB, NBA, NFL, and NHL are broadcast worldwide. Adults and young athletes strive to elevate their skill sets to the level of those in the Big 4, while men idolize and praise their abilities. For this reason, the Big 4 can be argued to hold the power to garner global support for the values, attitudes and behaviours they prize and depict, including hegemonic masculinity. An unfunded, undergraduate study does not have the resources to sample such a breadth of participants or make global claims. However, through an examination of the association between North American sports fans and hegemonic masculinity, this study can offer ideas for future researchers to explore the impact the Big 4 may have on the globalization of North American attitudes of masculinity.

The second justification is that scholars widely agree that hegemonic masculinity damages men, women and society, and that this damage prompts the need for inquiry into the sources that maintain, reproduce and facilitate it. As will be discussed later, hegemonic masculinity has been shown to underlie and contribute to diverse social problems. In order to mitigate these problems there is a pressing need to locate and understand the mechanisms that foster and perpetuate hegemonic masculinity in society.

In sum, the Big 4 are the focus of study because they comprise one of the premier arenas of mainstream male culture in North America. The prevalence and importance North American culture places on these sports, accompanied with the iconic status of male athletes, flags the Big 4 as a key source and proponent of hegemonic masculinity.

Research has explored how athletic participation increases men’s identification with hegemonic masculinity (Drummond, 2002; Messner, 1989, 1990, 1992, 2007; Whitson, 1990). Most men, however, are not athletes, but fans. It is estimated that 55% of Canadians watched
part or all of Super Bowl 49 (Bell Media, 2015). This research looks at sports from a different angle. It examines the influence of Big 4 sports culture beyond the field of play and the athletes to determine the extent of the association between sports fandom and hegemonic masculinity, thereby contributing to knowledge on the causes and conditions that reproduce hegemonic masculinity in society.

I have a personal interest in sports and hegemonic masculinity. In my youth I played many sports, and was heavily involved and successful in competitive martial arts. I was a two-time national champion, and also competed internationally. In seven years of competitive fighting I was taught to prize hegemonic masculinity. When I was introduced to the concept in sociology classes, I was intrigued by its accuracy and applicability to my own life, the lives of my peers, and to the mainstream image of men in society. I believe that the concept of hegemonic masculinity captures the consequences of socially valued and constructed male characteristics and expectations, negatively transforming and burdening the lives of men, others around them and society as a whole. In my view, the importance that North American culture places on sports that are infused with hegemonic masculine values and identification contributes significantly to the maintenance of hegemonic masculinity.

**Literature Review: If I Could Be Like Mike**

Antonio Gramsci used the term *hegemony* to explain the domination of one social class over another (Pellicani, 1989, p. 29). In contrast to Marx, who believed class domination occurred through coercion, for Gramsci, it occurred through consent (ibid, p. 32). Hegemony refers to the manipulative presentation of values, myths, beliefs, and ideals, including an overall worldview that the subordinate class comes to see as natural (ibid, pg. 32-33). As Donaldson (1993) reiterates, hegemony involves persuasion of the population through the media and social
institutions in ways that appear natural, ordinary and normal. The ruling class is able to maintain its dominance as long as they can maintain their façade of inherent hierarchy and obtain the consent of the subordinate class (Pellicani, 198, p. 29).

The term *hegemonic masculinity* was developed by R.W. Connell from Gramsci’s concept of *hegemony* in the early 1980’s. It is used to describe the most dominant way of being a man in society, a culturally idealized form of masculinity, and an ideal that all men use as a defining standard (Connell, 1990, p. 83; Connell, 1998, p. 476; Connell & Messerschmidt, 2005, p. 832). It can be understood as:

> [T]he configuration of gender practice which embodies the currently accepted answer to the problem of the legitimacy of patriarchy, which guarantees (or is taken to guarantee) the dominant position of men and the subordination of women (Connell, 2005, p. 77).

In other words, hegemonic masculinity is the set of gender norms and attitudes that rationalize male dominance over women. It is characterized by traits such as domination, subjugation, aggressiveness, competitiveness, athletic prowess, stoicism, and control (Cheng, 1999). These norms and attitudes then become viewed as innate, and most men (and women) come to consent to their perceived naturalness. Hegemonic masculinity prizes domination over other men and other races, as well as over women. It can be argued that it is expressed and solidified to secure power relations in social organizations such as familial and social relationships; in economic and socio-political systems and institutions; and in international networks of power (Connell, 2003). White, middle class, early middle-aged heterosexual men are seen as the epitome of hegemonic masculinity (Cheng, 1999).

Hegemonic masculinity is able to maintain its dominance by inhibiting subordinated masculinities from gaining legitimacy (Connell, 1987, p. 186-187). *Subordinated masculinities* are alternative embodiments of masculinity that deviate from or undermine hegemonic
masculinity, embodied, for instance, by homosexuals and artistic or intellectually inclined men (Connell, 2005, p. 78; Lusher & Robbins, 2010, 23).

Connell (2005) uses the term *complicit masculinity* to describe the masculinity of the majority of men in society. These men do not fully embody hegemonic masculinity but nevertheless support it and strive to manifest it (p. 79, 114). Men will go to great lengths to prove and enact masculinity, arguably with severe social consequences.

**Be a Man: The Damage of Hegemonic Masculinity**

In recent years, the explanatory power of hegemonic masculinity has evolved and expanded in scope. It has been applied in a variety of fields (Connell & Messerschmidt, 2005, p.853), producing a wide range of knowledge on the influence and damage it creates in the lives of men and women, with tangible impacts on society. For example, hegemonic masculinity has been used to theorize the relationship between men and crime (Connell & Messerschmidt, 2005, p. 833), insofar as criminal statistics show that crimes rates are significantly higher for men than for women (Siegel & McCormick, 2007, p.92) and that men are more likely to be victims of violent crime (Hollander, 2001, p. 83).

The literature also sheds light on the pervasive and significant role played by hegemonic masculinity in endorsing homophobia and the sexual objectification of women (Donaldson, 1993, p. 645); in the subordination of non-white, effeminate and non-violent masculinities (Demetriou, 2001, p.347); and in the reproduction of sexual inequality (Connell, 2005, p.832) through unequal treatment of women in workplaces such as law enforcement and broadcasting (Grubb & Billiot, 2010; Prokos & Padavic, 2002). It has been used to explain male emotional detachment such as withholding personal and intimate feelings (Bird, 1996, p. 123), as well as negative emotional and physical impacts on athletes (Messner, 1992). Hegemonic masculinity
has even been argued to contribute toward ongoing environmental deterioration (Pule, 2013; Rogers, 2008).

Men’s lower quality of health (compared to women) and risk-taking behaviours have also been attributed to hegemonic masculine values (Courtenay, 2000). Men use disregard for personal health as a way to signify strength and power, as the most powerful men are among those who ignore health and safety (Courtenay, 2000, p. 1388-1389). The consequences of this disregard for health are clear: on average, men die nearly seven years younger than women; men suffer 94% of all fatal work-related injuries in the U.S.; and men suffer more severe chronic medical conditions than women (ibid, p. 1394, 1397). Additionally, the hegemonic masculine standard can even work to harm those who attempt to disengage from it, as violence against homosexuals has been argued as a way to assert masculinity (Connell, 2005, p. 83).

Others, such as Synnott (2009), however, offer accounts of bravery, altruism, hard work and heroism as virtues of hegemonic masculinity that permeate into the actions of men (p. 99, 133). Synnott’s (2009) accounts of hegemonic masculinity leading to positive outcomes are noteworthy. The concern is that these beneficial male virtues may be accompanied by negative repercussions and abuse. Connell (1998) also believes that hegemonic masculinity can be a positive force (p. 476). The challenge is in constructing and advocating for a healthy masculinity that can maintain these virtues, without legitimizing harmful traits such as aggression; or, carrying consequences of oppression and subordination.

Even in consideration of the benefits that can be extrapolated from hegemonic masculinity, the predominant theme that emerges from the majority of the literature is that it is damaging and pervasive. This prompts the need to understand how such a detrimental masculinity is reproduced and justified, and warrants investigation into the mechanisms that
breed it. As an emblematic component of North American culture and its linkages to hegemonic masculinity, the Big 4 sports stand out as a key arena for investigation.

Pathways to Hegemonic Masculinity

A variety of factors open and constrict the options men have to construct and maintain a masculine identity. Beynon (2001) describes numerous characteristics that shape the enactment of, and opportunities for, masculinity among individuals: age, physique, sexual orientation, education, status, lifestyle, ethnicity, religion, class and occupation (p.10). For example, in interviews with current and former athletes, Messner (1989) uncovered the common theme that black and lower socio-economic status men view athletic success as their primary path to achieve a hegemonic masculine identity when compared to white men of higher status (p.76-83). Whitson (1990) argues that participation in contact sports is primarily limited to men who are physically stronger and larger (p.28). Moreover, Haywood & Mac an Ghaill (2003) address how jobs once considered masculine, such as physically demanding labour, are being phased out – further closing opportunities for men to gain a sense of masculinity (p. 21-30). The consequence of limiting opportunities for hegemonic masculinity can channel men into other available avenues to embody it.

Hegemonic masculinity can be difficult for many men to attain. Few have the capacity and resources to actually meet the standard (Connell, 2005, p. 79). There are, however, some channels that remain largely open for all men. Many of these pathways, including crime, steroid use, and violence, are socially unacceptable. Nonn (1998) suggests that some men at the bottom of the socio-economic ladder resort to securing social position through displays of aggression and violence (p. 319-322). Pyke (1996) also posits that the demeaned status and weak power base of lower-class men have led to their use of physical violence to assert masculinity (p. 544-
Legal avenues include political, economic and class-based power that many men do not have the resources to pursue. Immersion in sports culture and sports fandom, however, is an acceptable source of masculinity that remains open to nearly all men.

Participation in a sport culture can be viewed as both a manhood act and a method of doing gender. Manhood acts are performances that present oneself as a man and are defined by the hegemonic masculine ideal (Schrock & Schwalbe, 2009, p.284, 286), reproducing the seemingly inherent gender division. Schrock & Schwalbe (2009) emphasize that when men are unable to meet the ideal hegemonic standard (and embody complicit masculinity), they often over-compensate with hyper-masculine and destructive manhood acts (p. 289). Cheng (1999) reinforces this point, as one of the ways men prove their hegemonic masculinity is by acting aggressively toward what is regarded as “feminine”. Thus, sports fandom can be considered as a manhood act, signified in the endorsement of and participation in a hegemonic masculine environment, while also a distancing of oneself from femininity.

Doing gender involves socially crafting differences between males and females that are used to reproduce the artificial qualities of each gender (West & Zimmerman, 1987, p. 137). Contact sports are argued to be one arena where gender differences are emphasized and men do gender by expressing ‘manly’ qualities such as stamina, power, dominance, and competition. Spectators confirm their legitimacy and share in the virtues of athletes (ibid, p. 137-138). There is nothing ‘natural’ in acts that do gender or manhood acts – they are both socially fabricated ways of defining and upholding gender norms.

The Masculine Athlete

Research has explored how men and boys use athletic participation to achieve a sense of masculinity (Messner, 1989, 1990, 1992, 2007; Whitson, 1990). In one study, Messner (1990)
interviewed adult male athletes who reflected on their childhood experiences with sports, uncovering that boys are socialized to associate athletics with masculinity. This analysis is largely shared in the literature on masculinity, sports and boys (Hartmann, 2003; Swain, 2010). As boys age and become men, the ideology that sport is linked to masculinity remains. Connell and Messerschmidt (2005) go so far as to proclaim that contact sports are a symbol of masculinity (p. 833). Furthermore, in Drummond’s (2002) interviews with professional athletes, the common theme uncovered was that sports enhanced their masculine personas (p. 129). However, the ultra-competitive environment of mainstream sports works to weed out boys who are either less skilled or physically gifted (Messner, 1989, p. 75). Professional and collegiate sports participation is an extremely selective arena that has high physical requirements and limited availability. In the United States 3.1% of high school basketball players will play in college and only 1.2% of college players are drafted to the NBA (CBS News, 2011), making the embodiment hegemonic masculine identity based on actual athletic performance difficult to achieve.

The Masculine Fan

Both men and women enjoy watching and playing sports, and studies have shown that male and female sports fans exist in fairly equal numbers (Dietz-Uhler, Harrick, End & Jacquemotte, 2000, p. 226). Of note, a survey conducted by Dietz-Uhler et al. (2000) indicated that, for men, identification with sports is seen as a vital part of their identity, while women are less likely to consider themselves sports fans (p. 226). Moreover, Galyon & Wann (2012) reiterate that women are less likely to see being a sports fan as an important part of their identity (p. 585). The emphasis on sports as a key element of male identity indicates that fandom holds a deep significance for men as integral to their persona.
Sports fans are a social category, and, as Dietz-Uhler et al. (2000) contend, people gain a sense of who they are from their memberships in social categories (p. 226). Dietz-Uhler et al.’s (2000) survey data indicates that men consider themselves sports fans by acquiring sports knowledge, watching sports, and attending sporting events (p. 227). As there are degrees to each of these criteria, it can be argued that the differing commitment to these practices can affect the extent to which men consider “sports fan” as their primary social category, and the values and identification they draw from that category.

Association with sport culture is an acceptable pathway to masculinity that remains open to nearly all men, especially when compared to traditional avenues such as economic power. Studies have examined how association with sports and its mass culture connects men with the mainstream values, goals, and characteristics of hegemonic masculinity (Davis & Duncan, 2006; Hartmann, 2003; Kian, Clavio, Vincent & Shaw, 2011; Parrish & Nauright, 2012). Hartmann (2003) posits that when men spectate sports, they reinforce and maintain the masculine values of competitive sports and thereby identify with and internalize hegemonic masculinity (p. 17).

There are many ways men can connect with sports, including participation in fantasy sports leagues (Davis & Duncan, 2006, p. 244). Fantasy sports are games in which participants draft a team consisting of real life athletes. The athletes’ actual statistics are converted into fantasy points, and the participant’s team with the highest number of fantasy points wins. In fantasy sports men are able to use their superior sports knowledge as empowerment to demean less knowledgeable men (ibid, p.245, 260). Here men bond in a discreet, highly masculine environment, an “Old Boy’s Club” that prizes sports knowledge and competition; communication amongst participants is often aggressive, homophobic and sexist (ibid, p. 260).
The exploratory nature of Davis and Duncan’s (2006) study, in combination with a weak sample size of three interviews, leaves many avenues open for continued research. Furthermore, their conclusion that participation in fantasy sports enhances hegemonic masculine identity does not offer any information on the extent of this apparent influence. Participation in fantasy sports can be undertaken extremely casually, with limited engagement, or alternatively, it can be a rigorously followed regimen, where the user is constantly updating line-ups, adding and dropping free-agent players, and making trades to maximize their potential points. When accounting for the continuum of fantasy sports participation, it appears likely that the level of enhancement of hegemonic masculinity may be dependent on the degree of involvement and immersion. The relationship between hegemonic masculinity and association with sports may be more complex than Davis and Duncan’s (2006) blanket claim that fantasy sports lead to the support of hegemonic ideologies. There are degrees of masculine enhancement, and they may be dependent on degrees of association with, and involvement in, sports culture.

An additional means by which men can associate with sports is through participation in online sports discussions. Kian et al. (2011) examined online conversations on rivals.com, a popular sports message board for hard-core sports fans (indicated by the subscription fee). Their findings show that although society may publicly accept homosexual athletes (for example, Michael Sam and Jason Collins), in online sports communities the hegemonic masculine ideology still dominates. Posts that reinforce traditional gender norms and ideologies including homophobia and misogyny are common; other users rarely challenge these posts, an indication of their permissibility (Kian et al., 2011, p. 695-696). It seems that in the security of anonymity provided by the Internet, men are free to express their unrestrained opinions. The strength of
Kian et al.’s (2011) study is that it provides a view into the perceptions of masculinity and acceptable attitudes and behaviors within a hard-core sports fan environment.

In the study of sports fandom, Wann (1995) has set the bar for research that examines the motivations of fans. Wann’s (1995) seminal article includes a quantitative research design: a survey used to gauge the motivation of sports fans that has been replicated in numerous studies (see Armstrong, 2002; Donovan, Carlson & Zimmerman, 2005; Kim, Greenwell, Andrew, Lee & Mahoney, 2008). The emphasis Wann (1995) places on group affiliation as a key motivator can be argued to align with the idea that sports fandom unites men as part of a hegemonic masculine group, thereby justifying and upholding its core tenets.

Sports as a Mechanism of Social Solidarity

From a Durkheimian perspective, sports fandom has been argued to serve as a mechanism for integration and social cohesion (Smith, 1988, p. 57; Wann, 1995, p. 378; Wann & Branscombe, 1991). Sporting events are rituals that unite men through a common experience (Appelrouth & Desfor Edles, 2012, p. 114-115). This notion that sports can lead to a sense of affiliation and identification with a group parallels the idea of sport as a form of male bonding. Through association with sports men can experience cultural effervescence, construct and maintain a collective identity with the hegemonic masculine community, and avoid alienation and anomie.

The Durkheimian explanation of sports fans is not without its critics. Meier’s (1989) critique recognizes the multiplicity of explanations for becoming a sports fan, and points out that any attempt to lump the characteristics and rationales of sports fans into a single category is counter-productive. In a similar vein, it is necessary to acknowledge that not all sports fans will associate with hegemonic masculinity. Although Meier’s (1989) critique is valid, and men may
perceive sports in different lights, it can be argued that there is still a general sense of camaraderie among fans and there may be an association between some sports fans and hegemonic masculinity.

Literature Review: Conclusion

Scholarship in the field of gender studies describes hegemonic masculinity as a damaging yet sought after persona that the majority of men in North America strive to achieve. Sports comprise a realm that embodies the virtues of hegemonic masculinity. The prevalence and importance of sports in North American society fosters mechanisms that reproduce and maintain hegemonic masculinity. The extent of the impact and influence of hegemonic masculinity on sports culture, extending far beyond the field of play, remains understudied. This research integrates multiple and diverse forms of participation in sport culture through fan activities, as part of the independent variable, a comprehensive perspective not addressed in other studies. The intent is to answer: to what extent does men’s support of, association, identification, and fan involvement with the Big 4 sports leagues foster hegemonic masculinity? As discussed above, it will be crucial to isolate certain demographic variables in order to understand the complexity of the association.

Research Methodology: Measuring the Sports Fan

The goal of this study is to determine the extent of the association between sports fandom and support for hegemonic masculinity. Due to the nature of my research question, quantitative methods were more appropriate than qualitative methods, as the purpose of quantitative research is to describe trends and large-scale social processes (Bouma, Ling & Wilkinson, 2012, p.50).
Further, due to the time constraints of the Honours thesis and the size of the population, quantitative methods were useful in obtaining a large sample. Thus, an online survey was used.

Population

The population for this study was English-speaking men living in North America between the ages of 18-34, with access to the Internet. The decision for the population under study was based on multiple arguments. According to Nielsen’s 2013 year in sports media report, 18-34 year old viewers of the NHL, NBA, NFL and MLB comprised approximately one-third of total viewership (Nielsen, 2014). More importantly, ESPN reports that 18-34 year olds accounted for two thirds of those who accessed their website, 94% of whom are male (ESPN Research Demographics, 2014, para. 2). Since the data indicates that sports, especially on the Internet, are widely consumed by men between the ages of 18-34, it is my view that this is an appropriate population for this research given that the survey was administered online.

The close affiliation of this demographic with certain hegemonic traits offers additional support for the decision to limit the population to men between the ages of 18-34. Between the ages of 18-34 men reach their physical prime; physicality and strength can be used to demonstrate power, a key component of hegemonic masculinity (Beynon, 2002, p. 16). Moreover, younger men are more likely to express masculinity through risky behaviours such as drinking, fighting and sexual prowess (ibid, p. 20), while less likely to embody certain alternative expressions of masculinity, such as fatherhood. The notion that many hegemonic masculine traits are magnified in younger men adds further justification for the population.
Recruitment: Drafting Participants

Multiple methods of participant recruitment have been used in the attempt to reach this ambitious sample size within a limited time frame. Initial recruitment included circulating an email (Appendix 1) to professors at Dalhousie University, requesting their permission to recruit participants from their classes through presentations (Appendix 2), and Blackboard Learn (Appendix 3). Dalhousie student recruitment was appropriate and effective for advertising the survey, as it specifically reached out to the target population. A friend also generously agreed to make a short presentation to his classes at Memorial University (Appendix 4). I also emailed the secretarial staff and professors at various universities across Canada and the United States to notify their students and departments of my study (Appendix 5).

Finally, the survey was advertised on various online communities, including websites, forums and message boards (Appendix 6). Online recruitment turned out to be a beneficial recruitment method, as the Internet is a useful way to access potential participants outside of the university setting, with minimal time commitment. Furthermore, as the survey was administered on the Internet, all recruits had access.

The Survey

The survey measures the association between two variables. The independent variable of interest is the degree of support for, association, identification and fan involvement with the Big 4 sports leagues; the dependent variable of interest is degree of support for hegemonic masculinity. The survey consists of 58 questions in total: 22 questions that measure the independent variable, 28 questions that measure the dependent variable and 8 demographic questions, acting as the control variables (Appendix 7).

Measuring Hegemonic Masculinity
The questions that were used to measure the dependent variable were derived from three sources. Questions were either taken directly from the Male Attitude Norms Inventory (Luyt, 2005), the Male Role Norms Inventory (Leviant, Hall, Rankin, 2013) and the Male Role Norms Scale (Thompson, Pleck & Ferrera, 1992); adapted and reworded from these studies; or were original questions formulated through careful analysis of the literature. The masculinity scales that were referred to for this study generally measure the concept through operationalizing multiple characteristics and values such as sexuality, toughness, individualism, status and homophobia. Appendix 8 displays an example scale for corresponding measurable items of each concept (Luyt, 2005, p. 214) that was used as a basis for the construction of questions.

Measuring Sports Fandom

This study utilizes previous research that has examined sports fandom as a foundation for questions that measure the independent variable. Wann and Branscombe (1993) used Likert-scale questions to measure respondents’ identification with sports teams. They also measured fan involvement by asking how often respondents attended games. In addition to formulating questions based on previous research, I used my personal experience engaging in sport-related activities in the construction of questions. Thus, operationalization of the independent variable also includes questions that measure the amount of time and frequency participants spend watching sports, reading sports literature, discussing or debating sports topics with others or online, playing fantasy sports and sports video games; the amount of money spent on sports related merchandise (magazines, tickets, apparel, etc.), gambling on sports, and watching or listening to sports talk shows.

Informed Consent
Informed consent was obtained through a consent form that was available through a hyperlink on the front page of the survey (Appendix 9). Participants were notified that by clicking “start” they had given their consent to participate in the survey (Appendix 10). There was little, if any, predicted discomfort to the participants while answering the questions that pertained to sports fandom. The discomfort participants may have experienced when asked masculinity related questions was minimal. To mitigate the discomfort, participants were made aware that their answers were anonymous and that they could skip questions or withdraw from the survey at any time prior to submission.

Procedure

Data collection began on January 23, 2015 and ended on February, 5, 2015. In total, Opinio (survey software) recorded 431 unique observations. However, upon removing entries that did not complete the questions used for analysis, the final sample size was n=273.

Opinio produces a raw SPSS data file. This raw SPSS data generated from Opinio was converted to a readable and compatible STATA file using the program R. I then used STATA and Microsoft Excel to analyze and present the data generated from the survey. Data analysis predominantly focused on three variables of interest:

1. Independent variable of interest (1) - Sports fan intensity: this variable combines five questions that measure the frequency that respondents engage in fan practices. Appendix 11 presents a list of questions and Appendix 12 displays the correlation coefficients for each question. In each question, every value is assigned a numerical value from 0 to 5, with 0 indicating the lowest frequency and 5 indicating the highest. Respondents’ numerical values were combined creating a single number as a measurement of fan
intensity. Thus, this variable has a range from 0 to 25, 0 indicating the lowest fan intensity and 25 indicating the highest level of fan intensity. This variable is analyzed numerically and categorically based on respondents’ combined numerical values as:

<table>
<thead>
<tr>
<th>Fan Intensity</th>
<th>Numerical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very low</td>
<td>0 to 6</td>
</tr>
<tr>
<td>Low</td>
<td>7 to 12</td>
</tr>
<tr>
<td>Moderate</td>
<td>13 to 18</td>
</tr>
<tr>
<td>High</td>
<td>19 to 25</td>
</tr>
</tbody>
</table>

Table 1: Categorical Representation of Fan Intensity

2. Independent variable of interest (2) – Sports fan practices: this variable combines 9 questions that measure whether respondents engage or would like to engage in specific fan practices, activities or traditions. Appendix 13 presents a list of questions and Appendix 14 displays the correlation coefficients for each question. In this case, “No” was assigned a value of 0, and “Yes” was assigned a value of 1. The resulting range is 0 to 9, 0 indicating no engagement in fan practices, and 9 indicating engagement in all fan practices. This variable is analyzed numerically and categorically based on respondents’ combined numerical value as:

<table>
<thead>
<tr>
<th>Sports Fan Practices</th>
<th>Numerical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Fan</td>
<td>0 to 3</td>
</tr>
<tr>
<td>Moderate Fan</td>
<td>4 to 6</td>
</tr>
<tr>
<td>High Fan</td>
<td>7 to 9</td>
</tr>
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</table>

Table 2: Categorical Representation of Fan Practices

3. Dependent variable of interest – Masculinity Index: this variable combines 17 questions that measure respondents’ propensity for hegemonic masculinity. Appendix 15 presents a list of questions and Appendix 16 displays the correlation coefficients for each question. All questions were measured using a five point Likert-scale. Similar to the independent
variable, every answer is assigned a numeric value, with “Strongly Disagree” assigned as 0 and “Strongly Agree” assigned as 4. Thus, with 17 questions, the possible numerical range is 0 to 68, with 0 representing the lowest propensity for hegemonic masculinity and 68 representing the highest.

In addition to these three variables used to analyze the association between sports fandom and hegemonic masculinity, the literature indicates that it is necessary to incorporate certain control variables when assessing the relationship between sports fandom and hegemonic masculinity. Therefore I have included the following control variables:

4. Control variables: Race, income, education, sexual orientation, whether respondents play sports, and which sports they followed.

Through the use of t-tests, Pearson’s correlation coefficient, and OLS (least ordinary squares) regression analysis, the association between sports fandom and hegemonic masculinity was determined. This was achieved initially by examining the association between sports fan intensity and the Masculinity Index. This was followed by an analysis of the association between sports fan practices and the Masculinity Index. Finally, both independent variables were analyzed with the Masculinity Index while incorporating the control variables.

**Results: The Man Fan**

This section investigates whether sports fandom is associated with a propensity for hegemonic masculinity. It begins with an overview of the univariate distribution for each variable of interest, then an examination of the univariate distribution of each control variable. This is followed by a bivariate analysis, and finally, a multivariate analysis.
The univariate distribution for the Masculinity Index indicates that the distribution is approximately normal (Appendix 17). The mean for the Masculinity Index is 33.32, with a standard deviation of 13.77 (see Appendix 18 for numeric summary statistics). The data for sports fan intensity indicates that most (37%) of respondents are low intensity fans. A visual representation of the univariate distribution for sports fan intensity is presented in Appendix 19. However, approximately half (55.3%) of the sample are encompassed in the bottom two cohorts of fan intensity, while 44.7% fall in the two higher cohorts of fan intensity (see Appendix 20 for categorical summary statistics). Thus, overall, the sample displays a fairly equal number of ‘very low’ and ‘low’ intensity fans compared to ‘moderate’ and ‘high’ intensity fans. The numerical values used to categorize sports fan intensity have a mean of 10.04 and a standard deviation of 7.08. The data for sports fan practices shows that the modal category is ‘high’ level fans, indicating that 44.7% of respondents highly engage, or expressed desire to engage, in sports fan practices, activities or traditions. Numerically, the data for sports fan practices displayed a mean of 5.18 and a standard deviation of 2.98.

A close inspection of the characteristics of the sample indicate that the majority of respondents were white (78.02%), heterosexual (90.11%), hold either a high school diploma (39.19%) or a bachelor’s degree (33.7%), and either do not have an income (18.68%) or make under $20,000 (38.83%). The mean age of respondents was 24.01 with a standard deviation of 4.63.

As the first method of bivariate analysis, I examined the scatter plots that visually display a positive association of the independent variables to the Masculinity Index (Appendices 21 and 22). Next, the results from the bivariate regression (presented in Table 3, Model 1) provide support that sports fan intensity is positively associated with hegemonic masculinity and this is
statistically significant (.01 level). Using ‘very low’ intensity fans as the reference group, ‘low’ intensity fans’ Masculinity Index was 9.01 greater (compared to very low fans), ‘moderate’ intensity fans: 9.91, and ‘high’ intensity fans: 14.64. Table 3 Model 2 displays the results from the bivariate regression for fan practices and the Masculinity Index. Using ‘low’ engagement in sports fan practices as a reference category, ‘moderate’ fans’ Masculinity Index was 6.55 points greater (compared to low fans) and ‘high’ intensity fans were 12.43 points greater, and this association was also seen to be statistically significant (.01 level). The results of both bivariate regressions (Table 3 Models 1 and 2) displayed an adjusted R-squared value of 0.14, which denotes that in each particular instance the variable accounted for 14% of the variation in the Masculinity Index.

The results from the multiple regression (Table 3, Model 3) show that when accounting for external factors, the association between sports fan intensity and the Masculinity Index was diminished. Low intensity fans now displayed a coefficient of 3.77 (compared to 9.01 in Model 1) and moderate intensity fans exhibited a 3.38 coefficient (compared to 9.91), and both were seen as not statistically significant (.01 level). The coefficient for high intensity sports fans also diminished to 9.21 (compared to 14.64), but remained significant (.01 level). For sports fan practices, the coefficients for moderate and high intensity fans dropped drastically from 6.55 and 12.44 to .90 and .93, respectively. Furthermore, all of the categories for sports fan practices became statistically insignificant when accounting for the external variables. However, there still remains a rise in the Masculinity Index with each progressive categorical increase in both independent variables.
Table 3 - OLS Regression: "Masculinity Index" on sports fan intensity, sports fan practices, race, education, income, sexual orientation, nba fan, nhl fan, nfl fan, mlb fan, basketball player, hockey player, football player and baseball player

<table>
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<th>Variable</th>
<th>Description</th>
<th>Coef</th>
<th>Std. Err.</th>
<th>P-value</th>
<th>Coef</th>
<th>Std. Err.</th>
<th>P-value</th>
<th>Coef</th>
<th>Std. Err.</th>
<th>P-value</th>
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Using “White” as a reference category, all races exhibit a positive association with the Masculinity Index, with “Arabs” displaying the highest coefficient at 5.92, although no racial group was seen to be statistically significant. Sexual orientation appears to be statistically significant. Those who identify as ‘not-heterosexual’ exhibit a negative association with the Masculinity Index. Those who identified as ‘not-heterosexual’ lowered respondents’ levels of masculinity by 10.31 out of 68 when compared to respondents who identified as heterosexual.

Surprisingly, the data for baseball, hockey and basketball players were negatively associated with the Masculinity Index (when compared to non-players), although it was not statistically significant (.05 level). The data for football players, however, revealed a statistically significant (.05 level) and positive association with the Masculinity Index. Respondents who played football ranked 7.27 points higher in their level of masculinity (out of 68). Similarly, fans of basketball, hockey and baseball (when compared to non-fans) did not display a statistically significant association to the Masculinity Index. However, football fans did display a positive relationship with a coefficient of 3.27, and this was seen to be statistically significant, albeit at a 0.1 level.

Education was not statistically significant at any level. When compared to respondents who have “less than high school” education, those who had obtained high school or equivalent, community college or a bachelor’s level of education demonstrated a positive association with the Masculinity Index. In contrast, respondents who obtained professional, Masters, or Doctoral degrees displayed a negative association to the Masculinity Index. Also, the doctorate level of education had the single greatest effect on respondents’ Masculinity Index, as they demonstrated a 15.09 point (out of 68) lower Masculinity Index score.
For the income control variable, the ‘no income’ category was used as the reference group. All of the categories were deemed not statistically significant, except for those who earned $50,000 to $74,999 including benefits. Furthermore, all income categories exhibited a positive relationship to hegemonic masculinity except for the $20,000 to $34,999 cohort. Thus, only respondents who earned $50,000 to $74,999 displayed a statistically significant and positive association with the Masculinity Index – with a 10.26 (out of 68) increase in their Masculinity Index.

In relation to my hypothesis, the incorporation of external variables reduced the overall magnitude and significance of the association between sports fandom and hegemonic masculinity. When accounting for income, race, education, sexual orientation, and which sports respondents play and follow, casual sports fandom was not seen to heighten hegemonic masculine tendencies. However, the association between high intensity fans and hegemonic masculinity remains relatively high and statistically significant.

**Discussion**

To evaluate the association between hegemonic masculinity and sports fandom I began with a univariate analysis of the variables. The distribution for sports fan intensity and sports fan practices had similar characteristics, insofar as 44.7% of respondents ranked moderate or high in sports fan intensity, and 44.7% ranked high in sports fan practices. Their relationship to the Masculinity Index, a normally distributed numeric variable, was unclear upon examination of the univariate distributions.

In order to determine whether degree of sports fandom is associated with hegemonic masculinity, I first examined the scatter plots that measured the Masculinity Index against sports fan intensity and sports fan practices (Appendices 21 and 22), which showed that both variables
were positively associated with the Masculinity Index. For a more extensive understanding of the
association, I examined the regression output for sports fan intensity (Table 3 Model 1). The
output showed that the coefficients were similar, albeit slightly increasing in the first two levels
(‘low’ and ‘moderate’) when compared to ‘very low’ (the reference category), and the coefficient
was only much larger at the final level (‘high’). The coefficients for sports fan practices (Table 3
Model 2) indicated that there is a progressively larger increase in respondents’ Masculinity Index
for each distinct degree of fan participation. Overall, the bivariate regressions showed that both
independent variables - fan intensity and fan practices - had a positive relationship to the
Masculinity Index.

Upon examination of the categorical continuum of the independent variables, a striking
pattern was revealed, as they showed a statistically significant and progressive rise in the
Masculinity Index with greater exposure to sports culture. Thus, the findings from the bivariate
regression analysis aligned perfectly with the hypothesis. The data showed that with greater
degrees of sports fandom there was also a greater propensity for hegemonic masculinity.
However, based on the arguments presented in the literature, it was clear that an examination of
the bivariate relationship does not fully capture the complexity of the association. In order to take
the analysis one step further and control for external factors, a multiple regression was utilized.

Studies have attributed various demographic factors to fluctuations in hegemonic
masculine behaviours and support for its values (see Beynon, 2001; Cheng 1999; Nonn, 1998,
Pyke 1996). In addition, research has also illustrated that sports participation may influence
Moreover, based on the inherent violence in specific sports, I was interested as to whether or not
fans of certain sports exhibited a greater support for hegemonic masculinity. Thus it was
necessary to conduct a multiple regression in order to explore whether there was an independent association between sports fandom and hegemonic masculinity, while controlling for race, education, income, sexual orientation, sports participation and which sports respondents followed.

This research offers support for arguments in the literature that link certain personal attributes to hegemonic masculinity. When using ‘White’ as the reference group, all other racial categories exhibited a positive relationship to the Masculinity Index; and although statistically insignificant, this finding aligns with the dominant arguments in the literature. White men set the standard for hegemonic masculinity in North America, and minorities innately hold a marginalized masculine status (Cheng, 1999). The data align with the idea that minorities may feel pressured to compensate for their subordinate masculine position through endorsing hegemonic masculine values. Likewise, the data support the contention that non-heterosexual men will deviate from the hegemonic masculine standard. This can largely be attributed to the fact that homosexuals are considered the group against which hegemonic masculinity is measured and constructed (Cheng, 1999).

Also in line with the literature, graduate or professional educational attainment was seen as negatively associated with hegemonic masculinity, albeit not statistically significant. Lusher & Robbins (2010) note that academically inclined men are embodiments of subordinate masculinity and are associated with femininity (p.23).

In contrast to the dominant arguments in the literature, higher income men in this study held higher values on the Masculinity Index. This is surprising, as the literature normally associates lower income men with certain tenets of hegemonic masculinity such as violence, as Nonn (1998) and Pyke (1996) suggest. Although, it can be posited that high-income men will
embody and value alternative aspects of hegemonic masculinity such as economic power, suggesting that further research may be useful in determining the reasons for discrepancies in men’s specific manifestations of hegemonic masculinity.

Despite the overwhelming amount of research that links athletes to an enhanced hegemonic masculine persona (see Messner, 1989, 1990, 1992, 2007; Whitson 1990), basketball, hockey and baseball players displayed a lower score on the Masculinity Index when compared to non-athletes of those sports. One reason for this may be due to the wording of the question, as it asked whether participants “competitively” play basketball, football, baseball or hockey. Baseball, basketball and hockey can, for the most part, be played competitively in pick-up games, and therefore the respondent does not have to assume an ‘athlete’ identity. However, due to its requirements, football almost exclusively requires organized teams and league play. This point, combined with the violence inherent in football, can be argued to explain why football players demonstrated a statistically significant and positive association with the Masculinity Index, when compared to non-players. Thus, in further research it may be necessary to consider the extent to which athletes and sports participation is associated with hegemonic masculinity.

The multiple regression provided a deeper understanding of the association between sports fandom and hegemonic masculinity. When controlling for external variables, the magnitude of the association between sports fandom and hegemonic masculinity was reduced. Furthermore, upon controlling for these external variables, the association between degree of sports fan practices and the Masculinity Index was not statistically significant, indicating that whether one does, or does not engage in sports fan related practices is not a critical factor in uncovering the association between hegemonic masculinity and sports fandom. Additionally, the coefficients for ‘sports fan practices’ were extremely low – less than one – further signifying that
‘sports fan practices’ are a weak determinant of respondents’ propensity for hegemonic masculinity. Sports fan intensity, however, was seen as a better predictor of hegemonic masculinity.

Although the multiple regression reduced the extent of the association between ‘sports fan intensity’ and the Masculinity Index, it did reveal some compelling information. The most substantial finding uncovered was that, according to the data, regardless of external factors, high intensity sports fans (13% of the sample) reported a higher Masculinity Index score, and this was statistically significant (at a .05 level). This finding expands on the dominant arguments in the literature that sports are associated with hegemonic masculinity, and provides general support for my hypothesis.

Understanding the Association

The findings reveal that occasional engagement in sports is not associated with a greater propensity for hegemonic masculinity. Occasional participation can be argued to function more as external entertainment, where sports are not part of one’s identity. To reiterate, Dietz-Uhler et al. (2000) contend that people belong to many social categories, and to be considered a sports fan requires acquiring sports knowledge, watching sports, having exposure to sports, and attending sports events – to which there are degrees. In this sense it can be asserted that high intensity sports fans internalize sports and fandom as part of their primary social category. High intensity fans connect with and absorb hegemonic masculinity through constant exposure to sports culture, thus supporting the association between sports fandom and hegemonic masculinity. Ultimately, this helps to clarify why the data only show statistical support for the association between high intensity fans and hegemonic masculinity.
The findings suggest that immersion in sports that is the key factor. Immersion means more exposure and thereby more influence. Moreover, it is not just about how much, but also about the prominence of sports throughout one’s life. Drawing on Durkheimian notions of social cohesion (Smith, 1988), Wann’s (1995) group affiliation and Dietz-Uhler et al.’s (2000) social category explanation for sports fandom, those who are high intensity fans gain membership in a ‘boys’ club’ – a fan club – that celebrates hegemonic masculine bonding and values. With high immersion, hyper-masculine sports culture becomes internalized in one’s identity and behaviours, rather than remaining peripheral as an occasional event in one’s life.

North American culture can be argued to be already hegemonically masculine. The data from this study support this assertion. An examination of the intercept (Table 3 Model 3), which is 21.96, demonstrates the base masculinity score that is relatively high. Dietz Uhler et al.’s (2000) study has shown that the majority of men identify as casual sports fans. Thus, it would follow that casual sports involvement would only serve to preserve the general societal level of hegemonic masculinity, and would not be any more potent in enhancing hegemonic traits than any of the other facets of mainstream culture that sustain it, such as media and institutions. In summary, the high intensity group is the most reflective of the expectations of the hypothesis as immersion defines the true fan, and it is only through immersion that the full impact of exposure to sports culture is felt.

Managing the Association

Studies have qualitatively examined the association between sports fans and hegemonic masculinity. Hartmann (2003) states that “watching sports serves many men as a way to reinforce, rework, and maintain their masculinity” (p.17) and Davis and Duncan (2006) note that “fantasy sports do facilitate reinforcement of hegemonic ideologies” (p.260). This thesis
contributes to knowledge on the topic, as it provides a quantitative understanding of the extent of the association between sports fandom and hegemonic masculinity. There are degrees of sports fandom, and this data illustrates that only high intensity sports fans exhibit a powerful and statistically significant association with greater levels of hegemonic masculinity, while holding the other factors discussed constant.

The finding that it is only the high intensity fans who have a statistically significant association with hegemonic masculinity helps to clarify the association between sports fans and hegemonic masculinity, and manage the expectation that all levels of engagement with sports would work to bolster it. Sports fans are more prevalent in society than non-sports fans. Some polls even report as high as 71% of the general North American population are sports fans, and in one academic study, 83% of men identified as sports fans (Dietz-Uhler et al., 2000, p. 224, 226). This statistic is consistent with the current study’s sports fan intensity and sports fan practice univariate distributions. It would be overly ambitious to allege that all sports fans claim some association with hegemonic masculinity beyond that of the average man. The data demonstrate that identifying as a sports fan or participating in fan practices does not lead to a greater propensity for hegemonic masculinity.

These findings expand on existing knowledge of the mechanisms that work to reproduce hegemonic masculinity in North America. Similar to findings in other studies (Hartmann, 2003; Davis & Duncan; Kian et al., 2011, Messner, 1989, 1990, 1992, 2007; Whitson, 1990), the current study offers support for the idea that sports culture is associated with hegemonic masculine beliefs, values and behaviours that marginalize men and women by supporting oppressive gender norms. This study provides a unique perspective on the extent and nature of
this phenomenon, arguing that the association between sports fandom and hegemonic masculinity is more selective than it initially appears.

The Significance to the Study of Masculinities

This research offers insight into the potential that the globalization of the Big 4 can have in facilitating a global gender order that prizes oppressive and damaging North American gender norms. The Big 4 are becoming increasingly global. In 2014 the NBA played games in Mexico, England, Germany, Turkey, Brazil and China (NBA.com, 2014). Additionally, the NBA is now the most popular sports league in China, and basketball is China’s number one team sport, with over 300 million players (NBA.com, 2015). It was also announced in March that China will host NBA games in 2015 (ibid). Likewise, the NFL has played games in England and has announced its intention to have an NFL franchise in England by 2022. The NFL is currently exploring options to play games in Brazil, Germany and Mexico (NFL.com, 2015).

The world gender order can be defined as “the structure of relationships that interconnect gender regimes of institutions, and the gender orders of local society, on a world scale” (Connell, 1998, p. 7). The world gender order, however, is not an equal amalgamation of all societies, as the degree of cultural homogenization is largely dominated by North America (Connell, 2003). However, the interaction between societies’ gender orders does, in part, lead to the creation of a world gender order. Connell (2003) also attributes the formation of the world gender order to the creation of new mediums of gender relationship, beyond countries and regions. In this case, the Big 4 can be argued as having the potential to disseminate gender meanings globally, whether oppressive or not. Connell (2003) contends that there are few studies that focus on the creation of masculinity in global arenas; this is surprising, as she sees it as “a crucial frontier for research”. Moreover, as Bird (1996) argues, in order to change the dominant conception of masculinity, we
must pay specific attention to how norms are institutionalized (p.131), but also to how they are globalized. As the NBA, NHL, NFL and MLB become increasingly globalized, with games televised and even played overseas, the support the Big 4 garner for hegemonic masculinity can easily be overlooked.

Finally, these findings also indicate that the Big 4, a pillar of North American popular culture, contributes to the perpetuation and institutionalization of an oppressive and damaging gender order and identity. These values seep into our lives through advertising, movies, music, fashion and other components of mainstream culture permeated by the Big 4.

Limitations

The primary limitation of this research is that it cannot claim that greater degrees of sports fandom lead to a greater propensity for hegemonic masculinity, although it does support the conclusion that sports fandom is associated with a higher level of hegemonic masculinity. This study does not attempt to establish causality among the variables of interest. Although there may be an association between sport fandom and hegemonic masculinity, it can be argued that men who already support hegemonic masculinity happen to be attracted to the Big 4. In contrast, the causal relationship could be more complex. Although hegemonic masculine men may be drawn to the Big 4, it can be argued that through immersion in a hyper-masculine sport culture that extends into one’s life far beyond the stadium, hegemonic masculine tendencies are justified, cemented and compounded, facilitating the reproduction of oppressive gender norms. Regardless, additional research may be valuable in understanding how and why men draw hegemonic masculinity from the Big 4.

It is also necessary to mention that the sample size was not as large or as representative as desired. It was unfortunate that the sample did not include more racial minorities, and
respondents with high levels of education – likely a function of the mean age of participants. Furthermore, the inability to recruit participants outside of North America limited the scope of this study.

Finally, it is important to recognize that the Masculinity Index does not include questions that measure homophobia. Due to the low levels of correlation among the questions that measured homophobia and the other questions incorporated in the index it was necessary to omit the homophobia questions from the overall scale. Research that seeks to expand on this topic should carefully consider how homophobia is measured.

**Conclusion**

Hegemonic masculinity is the most sought after form of masculinity; its personification carries immense consequences for men, women and society. North American culture is pervaded by hegemonic masculinity – in movies, television, institutions, family structures and societal norms. Through an examination of sports fandom, this research provides a deeper understanding of the mechanisms that work to reproduce hegemonic masculinity and draws attention to its social consequences.

The literature indicates that there is a relationship between sports fandom and hegemonic masculinity; however, it does not offer any information on the extent of this association. This research is designed to address this gap, and show that the association between sports fandom and hegemonic masculinity is complex and more selective than appears. Through the use of a quantitative methodology, the data support the notion that high intensity sports fans are the only statistically significant group to exhibit a powerful association with hegemonic masculinity. The finding that casual sports fandom is not associated with an increased propensity for hegemonic masculinity tempers accusations that all involvement with sports instills greater hegemonic
masculine beliefs. It can be argued that casual sports fandom only works to preserve and reflect the already high hegemonic masculine standard that is prevalent in society. This study confirms that with immersion in sports there is increased affiliation with hegemonic masculinity.

I want to be clear that sports themselves are not the problem. I am optimistic that there can be a separation between sports and harmful masculine traits. The problem is that hegemonic masculinity has become so embedded in the Big 4 sports that the two have become largely inseparable. Moreover, the ramifications of hegemonic masculinity that are bred in sport culture are not confined to the realm of sports and fans. The broad social consequences include sexism, racism, homophobia, social inequality and environmental problems.

The finding that high intensity sports fandom is positively associated with hegemonic masculinity has implications for the study of masculinities and the global scope of its influence. The influence of the Big 4 and its embodiment of hegemonic masculinity, combined with the leagues’ globalization initiatives, can be argued to contribute to the creation of what Connell (2003) terms the ‘world gender order’. Future research into the global effect of the Big 4 in the dissemination of hegemonic masculinity would be useful in understanding the forces that may constitute the global gender order.

Finally, the implications of this research naturally segue into questions about the task of halting and reversing the impact of hegemonic masculinity. However idealistic it may be, combating hegemonic masculinity is a worthwhile goal - yet it requires a cultural shift. The pillars of mainstream male culture need to be reworked and redefined in order to advance an alternative masculinity. One way to change the culture of sport is for athletes to step up and become pioneers who contest hegemonic masculinity, advocating for, and embodying, a newer,
healthier masculinity. The following quote from a speech given by Kevin Durant, the 2014 NBA Most Valuable Player symbolizes the change that needs to be made.

Where I come from, hell, I mean, I wasn’t supposed to be here. I come from poverty, crime… and kids just don’t make it out. As a kid I was always taught that you got to be tough, you got to be hard, you’re not supposed to show emotion. But as I got older, and more secure with myself… it was cool to be… different. That’s why I’m here today (Patricof, Malloy & Malloy, 2014).

Moreover, a cultural shift requires that institutions, including universities and schools, recognize their role in perpetuating the glorification of hegemonic masculinity by overvaluing achievements in sports. Greater appreciation of artistic or academically inclined men can help change the perception of masculinity. Finally, education is the game-changer in shifting the culture, as with education men gain awareness of the damages of hegemonic masculinity, inciting transformation.
Bibliography


Appendix 1: Email to Professors

Hello PROFESSORNAME,

My name is Max Stick, and I am currently writing my Honours thesis in Sociology. I am conducting research that explores the association between sports fans and hegemonic masculinity, framed to respondents as “what sports mean to men”. I am attempting to analyze this association from a quantitative approach, using an online survey. I am emailing you to ask for your permission to make a short (1-2 minute) presentation at the onset of CLASSNAME and if you could post this message (See Appendix D) on your class BBlearn. The survey should only take about 10 minutes to complete. The survey is anonymous – no one will know whether you participate or not, and if you do, there is no way of linking your answers to your identity. If you have any questions please contact me at mx600038@dal.ca

Thank you for your time,

Max Stick
Appendix 2: Verbal Script for Classroom Recruitment

Hello Everyone,

My name is Max Stick, and I am a Sociology honours student here at Dalhousie. I am conducting a study that examines what sports (basketball, baseball, football, and hockey) mean to men. I am specifically looking for men between 18-34 years of age to participate in an online survey. The survey should only take about 10 minutes to complete. The survey is anonymous – no one will know whether you participate or not, and if you do, there is no way of linking your answers to your identity. If you choose to participate in the survey, you are not obligated to answer any question that you do not wish to, and you are also able to stop the survey at any time if you do not wish to complete it. If you have any questions you can email me at mx600038@dal.ca.

The survey can be found here (I will physically write the link on the board), or on BBlearn (assuming the professor is willing to post it).

Thank you
Hello Everyone,

Max Stick, a fourth-year undergraduate student at Dalhousie is looking for men aged 18-34 years old to participate in an online survey as part of his undergraduate Honours Sociology thesis. The survey is examining what sports (basketball, baseball, football, and hockey) mean to men. The survey is anonymous – no one will know whether you participate or not, and if you do, there is no way of linking your answers to your identity. If you choose to participate in the survey, you are not obligated to answer any question that you do not wish to, and you are also able to stop the survey at any time if you do not wish to complete it.

If you have any questions please contact Max Stick at mx60038@dal.ca

You can access the survey at:

Thank you
Appendix 4: Classroom Presentations at Memorial University

Hello Class,

Max Stick, a friend and Honours student in Sociology at Dalhousie University in Halifax has asked that I relay this message to students at Memorial. Max is conducting his honours thesis and is looking for men between the ages of 18-34 to complete an online survey about what sports (basketball, football, baseball and hockey) mean to men. The survey is anonymous – no one will know whether you participate or not, and if you do, there is no way of linking your answers to your identity. If you choose to participate in the survey, you are not obligated to answer any question that you do not wish to, and you are also able to stop the survey at any time if you do not wish to complete it. If you have any questions you can contact Max at mx600038@dal.ca

You can access the survey at:

https://surveys.dal.ca/opinio/s?s=27042

Thank you for your time
Dear Professor,

My name is Max Stick, and I am an undergraduate sociology student at Dalhousie in Halifax, Nova Scotia, Canada. I am conducting research that examines male values, behaviours and attitudes in relation to sports. I am emailing you to ask for your assistance by posting or circulating this message (below) to your students as a means of participant recruitment for an anonymous online survey.

Note: This study has been reviewed by the Dalhousie Research Ethics Board. If you have any questions please contact me at mx600038@dal.ca or my honours supervisor Dr. Martha Radice at martha.radice@dal.ca.

Thank you for your time.

Sincerely,

Max Stick

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Message:

Hello Everyone,

Max Stick, an undergraduate sociology student at Dalhousie University in Canada, is looking for men aged 18-34 years old to participate in an anonymous online survey. The survey examines values, behaviours and attitudes in relation to sports. If you choose to participate in the survey you are not obligated to answer any question that you do not wish to, and you are also able to stop the survey at any time if you do not wish to complete it.

If you have any questions please contact Max Stick at mx60038@dal.ca
You can access the survey at: https://surveys.dal.ca/opinion/s?s=27042

Thank you
Appendix 6: Internet Community Recruitment

Hello Everyone,

Do you like sports? Hate sports? Live for the game? I am looking for men between 18-34 years old who live in North America to answer a survey that examines what sports (basketball, baseball, football and hockey) mean to men. The survey is anonymous – no one will know whether you participate or not, and if you do, there is no way of linking your answers to your identity. If you choose to participate in the survey, you are not obligated to answer any question that you do not wish to, and you are also able to stop the survey at any time if you do not wish to complete it. If you have any questions please feel free to comment or email mx600038@dal.ca

You can access the survey at:

Thank you
Appendix 7: Survey Questions

Eligibility Question

Please answer the following question to determine if you are eligible to complete this survey.

1. Do you identify as male?
   a. Yes
   b. No

2. Age:
   a. [type in age]

Please answer the following questions. Note: all sports questions refer ONLY to professional baseball (MLB), basketball (NBA), football (NFL) and hockey (NHL).

3. Are you a fan of any of the following professional sports? Check all that apply.
   a. Basketball (NBA)
   b. Hockey (NHL)
   c. Baseball (MLB)
   d. Football (NFL)

4. In a typical day, do you watch NBA, NHL, NFL and/or MLB highlights on television or online?
   a. Yes
   b. No

5. In a typical week during the season, approximately how often do you watch part or all of an NBA, NHL, NFL and/or MLB game?
   a. Never
   b. Less than once per month
   c. Monthly
   d. Once a week
   e. A few times a week
   f. Every day

6. In a typical week during the season, approximately how often do you watch or listen to sports talk shows or podcasts on the radio, TV or online?
   a. Never
   b. Less than once per month
   c. Monthly
   d. Once a week
   e. A few times a week
   f. Every day
7. In a typical week during the season, approximately how often do you read sports magazines, online sports articles, or the sports section of the newspaper?
   a. Never
   b. Less than once per month
   c. Monthly
   d. Once a week
   e. A few times a week
   f. Every day

8. In a typical day, how much total time do you spend: reading, watching or listening to NBA, NFL, NHL and/or MLB discussions, highlights, events, games, or related shows on the internet, television, radio, or in print?
   a. None
   b. Less than 30 minutes
   c. 30 minutes to 1 hour
   d. 1 to 2 hours
   e. 2 to 3 hours
   f. More than 3 hours

9. Would you watch, read or listen to more NBA, NHL, NFL and/or MLB discussions, highlights, events, games, or related shows on the internet, television, radio or in print if you had more free time?
   a. Yes
   b. No

10. How often do you debate or talk about the NBA, NFL, NHL and/or MLB with others (in person or online)?
    a. None
    b. Less than 30 minutes
    c. 30 minutes to 1 hour
    d. 1 to 2 hours
    e. 2 to 3 hours
    f. More than 3 hours

11. Do you consider yourself knowledgeable about sports (NBA, NFL, NHL and/or MLB)?
    a. Yes
    b. No

12. Have you ever participated in a fantasy sports league or pool?
    a. Yes
    b. No

13. How often do you make lineup/roster changes?
    a. Not Applicable (I have never played fantasy sports)
    b. Never
c. Irregularly
d. Regularly (Each Matchup or when a player is injured)

14. Do you watch fantasy shows, check stats, standings or other information to make decisions about your fantasy sports league or pool?
   a. Not applicable (I have never played fantasy sports)
   b. Yes
   c. No

15. Do you use sports apps on your mobile device?
   a. Not applicable (I do not own a mobile device)
   b. Yes
   c. No

16. In a typical week, approximately how often do you use your mobile device to check sports scores, news or videos?
   a. Not applicable (I do not own a mobile device)
   b. Less than once per month
   c. Monthly
   d. Never
   e. Once a week
   f. A few times a week
   g. Every day

17. Do play sports video games?
   a. Not applicable (I do not play video games)
   b. Yes
   c. No

18. Do you own any NBA, NFL, NHL or MLB team apparel (including hats)?
   a. Yes
   b. No

19. Have you ever gambled on sports for money (with friends, at lottery terminals, casinos, PROLINE, Fan Duel, Draft Kings, etc.)?
   a. Yes
   b. No

20. How often do you gamble on sports
   a. Not applicable (I have never gambled on sports)
   b. I do not regularly gamble on sports
   c. Less than once per month
   d. Monthly
   e. Once a week
   f. A few times a week
   g. Every day
21. In a typical month during the season, how much money do you spend on sports related products or merchandise? (Apparel, gambling, tickets, magazines, books, other subscriptions, speciality sports channels, sports video games, collectibles, etc.)
   a. None
   b. $1-$49
   c. $50-$99
   d. $100-$249
   e. $250-$499
   f. More than $500

22. Have you ever attended an NBA, NHL, NFL or MLB game?
   a. Yes
   b. No

23. If you answered no to the previous question (q20), are you interested in attending an NBA, NHL, NFL or MLB game?
   a. Yes
   b. No

24. How far would you be willing to travel to see an NBA, MLB, NFL or NHL game?
   a. Not applicable (I do not want to attend a game)
   b. Within state/province
   c. Within region
   d. Outside of region

Please indicate your level of agreement with the following statements.

25. It is natural for men to want to compete with each other
   a. Strongly agree
   b. Somewhat agree
   c. Neither agree nor disagree
   d. Somewhat disagree
   e. Strongly disagree

26. You should not back down from a fight
   a. Strongly agree
   b. Somewhat agree
   c. Neither agree nor disagree
   d. Somewhat disagree
   e. Strongly disagree

27. Men should have a high tolerance for pain
   a. Strongly agree
b. Somewhat agree  
c. Neither agree nor disagree  
d. Somewhat disagree  
e. Strongly disagree  

28. It is important to be physically strong  
a. Strongly agree  
b. Somewhat agree  
c. Neither agree nor disagree  
d. Somewhat disagree  
e. Strongly disagree  

29. If you are frightened, you should try not to let others see it  
a. Strongly agree  
b. Somewhat agree  
c. Neither agree nor disagree  
d. Somewhat disagree  
e. Strongly disagree  

30. It is important for men to take responsibility for their own failure  
a. Strongly agree  
b. Somewhat agree  
c. Neither agree nor disagree  
d. Somewhat disagree  
e. Strongly disagree  

31. It is important for men to be self-sufficient  
a. Strongly agree  
b. Somewhat agree  
c. Neither agree nor disagree  
d. Somewhat disagree  
e. Strongly disagree  

32. The father is the leader of the family  
a. Strongly agree  
b. Somewhat agree  
c. Neither agree nor disagree  
d. Somewhat disagree  
e. Strongly disagree  

33. Men should like driving fast  
a. Strongly agree  
b. Somewhat agree  
c. Neither agree nor disagree  
d. Somewhat disagree  
e. Strongly disagree
34. Men should eat meat
   a. Strongly agree
   b. Somewhat agree
   c. Neither agree nor disagree
   d. Somewhat disagree
   e. Strongly disagree

35. Men prefer action over romance movies
   a. Strongly agree
   b. Somewhat agree
   c. Neither agree nor disagree
   d. Somewhat disagree
   e. Strongly disagree

36. Men should prefer contact sports over non-contact sports
   a. Strongly agree
   b. Somewhat agree
   c. Neither agree nor disagree
   d. Somewhat disagree
   e. Strongly disagree

37. Boys should not play with dolls
   a. Strongly agree
   b. Somewhat agree
   c. Neither agree nor disagree
   d. Somewhat disagree
   e. Strongly disagree

38. Some men can be considered “girlie”
   a. Strongly agree
   b. Somewhat agree
   c. Neither agree nor disagree
   d. Somewhat disagree
   e. Strongly disagree

39. Men are comfortable when undressing in the locker or washroom when gay men are present
   a. Strongly agree
   b. Somewhat agree
   c. Neither agree nor disagree
   d. Somewhat disagree
   e. Strongly disagree

40. Men are comfortable seeing gay men kiss in public
   a. Strongly agree
b. Somewhat agree  
c. Neither agree nor disagree  
d. Somewhat disagree  
e. Strongly disagree

41. A father would be disappointed if his son is gay  
a. Strongly agree  
b. Somewhat agree  
c. Neither agree nor disagree  
d. Somewhat disagree  
e. Strongly disagree

42. It is slutty for women to regularly have sex with different partners  
a. Strongly agree  
b. Somewhat agree  
c. Neither agree nor disagree  
d. Somewhat disagree  
e. Strongly disagree

43. Only females should be cheerleaders in professional sports  
a. Strongly agree  
b. Somewhat agree  
c. Neither agree nor disagree  
d. Somewhat disagree  
e. Strongly disagree

44. Men should like to have sex  
a. Strongly agree  
b. Somewhat agree  
c. Neither agree nor disagree  
d. Somewhat disagree  
e. Strongly disagree

45. Men should always be ready for sex  
a. Strongly agree  
b. Somewhat agree  
c. Neither agree nor disagree  
d. Somewhat disagree  
e. Strongly disagree

46. You are aggressive  
a. Strongly agree  
b. Somewhat agree  
c. Neither agree nor disagree  
d. Somewhat disagree  
e. Strongly disagree
47. You are competitive
   a. Strongly agree
   b. Somewhat agree
   c. Neither agree nor disagree
   d. Somewhat disagree
   e. Strongly disagree

48. You are confident
   a. Strongly agree
   b. Somewhat agree
   c. Neither agree nor disagree
   d. Somewhat disagree
   e. Strongly disagree

49. You are independent
   a. Strongly agree
   b. Somewhat agree
   c. Neither agree nor disagree
   d. Somewhat disagree
   e. Strongly disagree

50. You would rather give orders than receive them
   a. Strongly agree
   b. Somewhat agree
   c. Neither agree nor disagree
   d. Somewhat disagree
   e. Strongly disagree

51. You do not give up easily
   a. Strongly agree
   b. Somewhat agree
   c. Neither agree nor disagree
   d. Somewhat disagree
   e. Strongly disagree

52. Your feelings get hurt easily
   a. Strongly agree
   b. Somewhat agree
   c. Neither agree nor disagree
   d. Somewhat disagree
   e. Strongly disagree

Please answer the following questions.
53. Do you currently play any of the following sports at a professional, semi-professional or collegiate level (mark all that apply)?
a. Basketball
b. Hockey
c. Football
d. Baseball

54. In terms of your ethnic or racial origin, you identify as:
   a. White
   b. Chinese
   c. South Asian (e.g. East Indian, Pakistani, Sri Lankan, etc.)
   d. Black
   e. Filipino
   f. Latin American
   g. Southeast Asian (e.g. Vietnamese, Cambodian, Malaysian, Laotian, etc.)
   h. Arab
   i. West Asian (e.g. Iranian, Afghan, etc.)
   j. Korean
   k. Japanese
   l. North American Indian
   m. Other – Specify
   n. Prefer not to answer

55. What is your sexual orientation?
   a. [type in sexual orientation]

56. What is your total personal income including benefits?
   a. No income
   b. Under $20,000
   c. $20,000 to $34,999
   d. $35,000 to $49,999
   e. $50,000 to $74,999
   f. $75,000 to $99,999
   g. More than $100,000

57. What is the highest level of education you have completed?
   a. Some High School
   b. High school diploma or equivalent
   c. Community or Junior College, CEGEP or other non-university certificate or diploma
   d. University (Bachelor’s) degree
   e. Professional Degree (e.g. medicine, dentistry, law)
   f. Master’s Degree
   g. Doctorate

58. What state or province do you currently reside in?
   a. Province and State List.
## Appendix 8: Concepts of Male Norms

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<th>sexuality</th>
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<th>individualism</th>
<th>status</th>
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<td>assertive activity</td>
<td>achievement</td>
<td>homophobic</td>
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<tr>
<td></td>
<td>tolerance</td>
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<td>management</td>
<td>ostracism</td>
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<td>practice</td>
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<td>self-containment</td>
<td>male independence</td>
<td>resource management</td>
<td>antihomoerotic</td>
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<td></td>
<td>practice</td>
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<td>interpersonal</td>
<td>power management</td>
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<td></td>
<td></td>
<td>dominance</td>
<td></td>
<td>avoidance</td>
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</tbody>
</table>

Source: Luyt, 2005, p.214
Appendix 9: Consent Form

What Sports Mean to Men

You are invited to take part in research being conducted by me, Max Stick, an undergraduate student in Sociology, as part of my honours degree at Dalhousie University. The purpose of this research is to explore whether or not men’s support of, association, identification and involvement with sports influences their values, behaviours and ideologies. I will write up the results of this research in a paper for my class, called the honours thesis.

As a participant in the research you will be asked to answer 58 questions in a survey conducted over the internet using Opinio software. The survey will take about 10 minutes to complete. All responses will be stored on a secure Dalhousie University server, and will be processed using Stata statistical software and Microsoft Excel. The survey does not ask for your name, and no grouping with less than 10 responses will be reported.

Your participation in this research is entirely voluntary. You do not have to answer questions that you do not want to answer, and you are welcome to stop the survey at any time if you no longer wish to participate. Your survey answers will not be included unless you click the ‘submit’ button. However, since the survey is anonymous, I will not be able to remove your information after the survey has been submitted.

Information that you provide will be kept private and will be anonymous, which means that no identifying details such as your name will be recorded. Only the honours class supervisor and I will have access to the unprocessed information you offer. I will describe and share general findings in a presentation to the Sociology and Social Anthropology Department and in my honours thesis. Nothing that could identify you will be included in the presentation or the thesis. I will keep the anonymous information so that I can learn more from it as I continue with my studies.

The risks associated with this study are minimal, but may include discomfort. If participants experience any discomfort they are able to end the survey immediately and discard their answers.

There will be no direct benefit to you in participating in this research and you will not receive compensation. The research, however, will contribute to knowledge of the mechanisms that influence the values, behaviours and ideologies of men. It may also provide contributions to future researchers who are investigating the globalization of gender, and are considering the role of sports. If you would like to see how your information is used, please feel free to contact me and I will send you a copy of my honours thesis after April 30.

If you have questions or concerns about the research please feel free to contact me or the honours class supervisor. My contact information is mx600038@dal.ca. You can contact the honours class supervisor, Dr Martha Radice, at the Department of Sociology and Social Anthropology, Dalhousie University on (902) 494-6747, or email martha.radice@dal.ca.

If you have any ethical concerns about your participation in this research, you may contact Catherine Connors, Director, Research Ethics, Dalhousie University at (902) 494-1462, or email ethics@dal.ca.
Appendix 10: First Page Consent Form

You are invited to participate in a survey on the values and behaviours of male sports fans aged 18-34. The survey takes about 10 minutes to complete. Your assistance in completing the survey is important to making this study possible. We realize your time is very precious, and we greatly appreciate your help. Please be assured that no personal or identifiable information will be gathered or used and all results will be aggregated for analysis and reporting. The project has been reviewed by the Dalhousie University Social Sciences Research Ethics Board. For further information about the project and the research please feel free to contact me at: mx600038@dal.ca. By clicking on the "Start" tab you consent to participating in the survey and have read the information letter linked here (hyperlink).
Appendix 11: Sports Fan Intensity Questions Composition

Sports fan intensity index question composition

1. In a typical week during the season, approximately how often do you watch part or all of an NBA, NHL, NFL and/or MLB game?

2. In a typical week during the season, approximately how often do you watch or listen to sports talk shows or podcasts on the radio, TV or online?

3. In a typical week during the season, approximately how often do you read sports magazines, online sports articles, or the sports section of the newspaper?

4. In a typical week, approximately how often do you use your mobile device to check sports scores, news or videos?

5. How often do you gamble on sports?

Numeric values for responses

0 = Never

1 = Less than once per month

2 = Monthly

3 = Once a week

4 = A few times a week

5 = Every day
### Table 1: Correlation Coefficients for Questions that compose Fan Intensity

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<th>2</th>
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<th>4</th>
<th>5</th>
</tr>
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<td>(1) Game</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) Listen</td>
<td>0.7076**</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>(3) Read</td>
<td>0.6846**</td>
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<td>1</td>
<td></td>
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<td>(4) Apps</td>
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<tr>
<td>(5) Gamble</td>
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<td>1</td>
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</table>

n=273

**p<.01

Question numbers correspond with Appendix 10
Appendix 13: Sports Fan Practices Question Composition

1. In a typical day, do you watch NBA, NHL, NFL and/or MLB highlights on television or online?

2. Would you watch, read or listen to more NBA, NHL, NFL and/or MLB discussions, highlights, events, games, or related shows on the internet, television, radio or in print if you had more free time?

3. Do you consider yourself knowledgeable about sports (NBA, NFL, NHL and/or MLB)?

4. Have you ever participated in a fantasy sports league or pool?

5. Do you use sports apps on your mobile device?

6. Do play sports video games?

7. Have you ever gambled on sports for money (with friends, at lottery terminals, casinos, PROLINE, FanDuel, DraftKings, etc.)?

8. Do you own any NBA, NFL, NHL or MLB team apparel?

9. Are you interested in attending an NBA, NHL, NFL or MLB game?

Numeric values for responses

0 = No

1 = Yes
### Appendix 14: Correlation Coefficients for Sports Fan Practices

#### Table 2: Correlation Coefficients for Questions that compose Fan Practices

<table>
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<tr>
<th>Fan Practices Questions</th>
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<td>(1) Highlights</td>
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<td>(2) Freetime</td>
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<td>(3) Knowledge</td>
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<td>(4) Fantasy</td>
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<td>0.2967**</td>
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<td>(5) Apps</td>
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<td>(6) VG</td>
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<td>(7) Gamble</td>
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<td>(9) Game</td>
<td>0.4284**</td>
<td>0.3648**</td>
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<td>0.4089**</td>
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n=273  
**p<.01  
Question numbers correspond with Appendix 12
Appendix 15: Masculinity Index Questions Composition

1. It is natural for men to want to compete with each other
2. You should not back down from a fight
3. Men should have a high tolerance for pain
4. It is important to be physically strong
5. If you are frightened, you should try not to let others see it
6. It is important for men to be self-sufficient
7. The father is the leader of the family
8. Men should like driving fast
9. Men should eat meat
10. Men prefer action over romance movies
11. Men should prefer contact sports over non-contact sports
12. Boys should not play with dolls
13. It is slutty for women to regularly have sex with different partners
14. Only females should be cheerleaders in professional sports
15. Men should like to have sex
16. Men should always be ready for sex
17. You are aggressive

Numeric values for each question

0 = Strongly disagree
1 = Somewhat disagree
2 = Neither agree nor disagree
3 = Somewhat agree
4 = Strongly agree
### Appendix 16: Correlation Coefficients for the Masculinity Index

#### Table 3: Correlation Coefficients for Questions that compose the Masculinity Index

<table>
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<th>Masculinity Questions</th>
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<td>(1) Compete</td>
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<td>0.5413**</td>
<td>0.5812**</td>
<td>0.5843**</td>
<td>0.4897**</td>
<td>0.4159**</td>
<td>0.4874**</td>
<td>0.0136</td>
<td>0.4126**</td>
<td>0.4013**</td>
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<td>(2) Fight</td>
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<td>0.5843**</td>
<td>0.4897**</td>
<td>0.4159**</td>
<td>0.4874**</td>
<td>0.0136</td>
<td>0.4126**</td>
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<td>(3) Pain</td>
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<td>(12) Dolls</td>
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<td>0.0136</td>
<td>0.4013**</td>
<td>0.5148**</td>
<td>0.5347**</td>
<td>0.5608**</td>
<td>0.3966**</td>
<td>0.4696**</td>
<td>0.4499**</td>
<td>0.3983**</td>
<td>1.000</td>
<td>0.4453**</td>
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<tr>
<td>(13) Slut</td>
<td>0.4013**</td>
<td>0.0136</td>
<td>0.5148**</td>
<td>0.5347**</td>
<td>0.5608**</td>
<td>0.3966**</td>
<td>0.4696**</td>
<td>0.4499**</td>
<td>0.3983**</td>
<td>0.4453**</td>
<td>1.000</td>
<td>0.5518**</td>
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<td>(14) Movies</td>
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<td>0.5347**</td>
<td>0.5608**</td>
<td>0.3966**</td>
<td>0.4696**</td>
<td>0.4499**</td>
<td>0.3983**</td>
<td>0.4453**</td>
<td>0.5518**</td>
<td>1.000</td>
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<td>0.0164</td>
<td>1.000</td>
<td>0.0164</td>
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<td>(15) Likeness</td>
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<td>0.5608**</td>
<td>0.3966**</td>
<td>0.4696**</td>
<td>0.4499**</td>
<td>0.3983**</td>
<td>0.4453**</td>
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<td>1.000</td>
<td>0.0164</td>
<td>0.0164</td>
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<td>1.000</td>
<td>0.0164</td>
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<td>(16) Aggressive</td>
<td>0.5608**</td>
<td>0.3966**</td>
<td>0.4696**</td>
<td>0.4499**</td>
<td>0.3983**</td>
<td>0.4453**</td>
<td>0.5518**</td>
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<td>1.000</td>
<td>0.0164</td>
<td>1.000</td>
<td>0.0164</td>
<td>1.000</td>
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<tr>
<td>(17) Masculinity</td>
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<td>0.0164</td>
<td>1.000</td>
<td>0.0164</td>
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</tbody>
</table>

**Note:** All correlations are significant at p < 0.01. The number of participants (n) is 273.

**Question numbers correspond with Appendix X.**
Appendix 17: Univariate Distribution: Masculinity Index

Masculinity Index

- Vertical axis: Percent
- Horizontal axis: Masculinity Score
- Range of Masculinity Score: 0 to 80
- Range of Percent: 0 to 15

The histogram shows the distribution of Masculinity Score with peaks around the mid-range values.
Appendix 18: Numeric Summary Statistics

**Table 4: Summary Statistics for Numeric Variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
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<tbody>
<tr>
<td><strong>Masculinity index</strong></td>
<td>33.32</td>
<td>13.77</td>
<td>0</td>
<td>68</td>
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<tr>
<td><strong>Sports fan intensity index</strong></td>
<td>10.04</td>
<td>7.08</td>
<td>0</td>
<td>25</td>
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<tr>
<td><strong>Sports fan practices index</strong></td>
<td>5.18</td>
<td>2.98</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>24.01</td>
<td>4.64</td>
<td>18</td>
<td>34</td>
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<tr>
<td>n=273</td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

Univariate Distribution of Independent Variables (%)

Sports Fan Intensity
- Very Low: 37%
- Low: 18.32%
- Moderate: 31.5%
- High: 13.19%

Sports Fan Practices
- Very Low: 31.1%
- Low: 24.2%
- Moderate: 44.7%

n=273
### Appendix 20: Categorical Summary Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Percentage</th>
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<tr>
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</tr>
<tr>
<td>Very Low</td>
<td></td>
<td>37.0</td>
</tr>
<tr>
<td>Low</td>
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<td>18.3</td>
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<tr>
<td>Moderate</td>
<td></td>
<td>31.5</td>
</tr>
<tr>
<td>High</td>
<td></td>
<td>13.2</td>
</tr>
<tr>
<td><strong>Sports fan Practices</strong></td>
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<td></td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td>31.1</td>
</tr>
<tr>
<td>Moderate</td>
<td></td>
<td>24.2</td>
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<tr>
<td>High</td>
<td></td>
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<tr>
<td><strong>Race</strong></td>
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n=273
Appendix 21: Scatter Plot - Masculinity Index and Sports Fan Intensity
Appendix 22: Scatter Plot - Masculinity Intensity and Sports Fan Practices