

The Effects of Masculinity Threats on Perceptions of Physical Aggression

by

Sarah Higdon

A thesis submitted in partial fulfillment of the requirements
for graduation with Honors in Psychology.

Whitman College
2019

Certificate of Approval

This is to certify that the accompanying thesis by Sarah Higdon has been accepted in partial fulfillment of the requirements for graduation with Honors in Psychology.

Matthew Prull

Whitman College
May 08, 2019

Table of Contents

Abstract	iv
List of Figures and Tables	v
Introduction	1
Experiment 1	14
Method	14
Participants and Design	14
Materials	15
Procedure	17
Results	17
Data Scoring and Cleaning	17
Experiment-General Hypotheses	19
Experiment-Specific Hypotheses	20
Exploratory/ Additional Analyses	21
Discussion	22
Experiment 2	26
Method	26
Participants and Design	26
Materials	28
Procedure	28
Results	29
Experiment-General Hypotheses	30
Experiment-Specific Hypotheses	31
Exploratory/ Additional Analyses	33
Discussion	35
General Discussion	38
Aims and Hypotheses	38
Limitations	41
Experiment 1	41
Experiment 2	42
Implications and Future Research	43
Appendix A	48
HMI-R Scale	48
Appendix B	49
Vignette Samples	49
Aggressive 1	49
Nonaggressive 1	49
Aggressive 2	50
Nonaggressive 2	50
References	52

Abstract

Reactions to masculinity threats have been well-documented in previous psychological research. The current study seeks to contribute to this literature by assessing men's perceptions of aggression, rather than their physical reactions, following a masculinity threat. My main research hypothesis is that individuals who perceive aggressive actions as acceptable will also perceive them as imitable. Additionally, when hypermasculine individuals are threatened, they will perceive aggression as more acceptable than those who are not. Other experiment-specific hypotheses are investigated. In the first experiment, participants in the threatened condition were required to paint their nails, while the control condition painted a picture. Participants in the second experiment watched media that approaches masculinity in different ways. Participants in both experiments then read a series of social vignettes and were asked to rate each vignette on acceptability, aggressiveness, and imitability. There was no effect of the masculinity threat in either experiment; however, there was a positive correlation between acceptability and imitability in both experiments. Cross-cultural differences are examined, and future research on intervention strategies and cultural differences in masculinity and aggression are discussed.

List of Figures and Tables

Figure 1	20
Figure 2	21
Table 1	18
Table 2	19
Table 3	29
Table 4	31
Table 5	34

Introduction

Aggression is often defined as a type of violence that is directed towards an individual where the immediate intention is to cause harm or unpleasantness (Anderson & Bushman, 2002). The study of aggression is becoming paramount in social psychology, as many signs point to an increase in violence in modern societies. According to the most recent Global Peace Index report, violence is increasing in a majority of the world's countries, and the United States has dropped to the 121st position on a list of 163 countries ranked by peacefulness (Diaz, 2018; Institute for Economics and Peace, 2018). Though violent crime rates have gone down in the past few years in the United States (Gramlich, 2019), violence continues to be an ongoing issue throughout the world. While not all violence is perpetuated by men¹, research has shown that men, on average, tend to be significantly more aggressive than women (e.g., Basow, Cahill, Phelan, Longshore, & McGillicuddy-DeLisi, 2007; Bosson, Vandello, Burnaford, Weaver, & Wasti, 2009; Buss & Perry, 1992; Stewart-Williams, 2002) and that men commit violent crimes significantly more than women. Additionally, one in four women in the United States has experienced some form of physical violence from a partner (Centers for Disease Control and Prevention, 2017), and nearly 30% of women worldwide have experienced some form of physical violence (Ellsberg et al., 2015). The current study seeks to add to the body of literature on aggression in a new way by

¹ It is important to note that “male” and “female” are not the only genders that exist in society, and that the gender and sex binaries should be questioned and approached by researchers and society alike. However, I will be referring only to “men” and “women” throughout this paper to keep consistent with prior research.

assessing perceptions of aggression following masculinity threats, and linking aggression to the social concept of hypermasculinity.

Hypermasculinity is defined as having three characteristics: the view of violence as manly, the perception of danger as exciting, and a callousness toward women, all of which exist under an umbrella of extreme emotional control (Dahl, Vescio, & Weaver, 2015; Mosher & Sirkin, 1984). Hypermasculinity is not only a societal phenomenon that courses through the media and set of social standards that govern everyday life (Thompson & Cafri, 2007); it is an internalized quality that men are pressured to perform outwardly (Mosher & Sirkin, 1984; Pascoe, 2007). Without regulation, hypermasculinity creates an unrealistic expectation that men must be physically strong, aggressive, and ooze sex appeal in order to be considered masculine. However, masculinity itself is not bestowed upon a man by virtue of being male; men have to constantly earn the title of being masculine (Pascoe, 2007; Willer, Conlon, Rogalin, & Wojnowicz, 2013). Obtaining masculine power is a continual process that needs to be proven daily (Bosson & Vandello, 2011; Willer et al., 2013), or else a man will be “knocked off the hill” in society (Hilburn, 2016). This proving process, especially for men already in power, often results in doubt, self-esteem issues, isolation from friends, and an inability to connect emotionally with women (Bosson & Vandello, 2011; Hillburn, 2016). More dangerously, the masculine proving process can result in violence against others by justifying and encouraging aggression as a proper means of restoring manhood (Dahl et al., 2015).

There is much room for insecurity throughout the masculine proving process: Western society has unspoken standards for what it means to be masculine, such as being strong and the breadwinner of the family, but there are no set guidelines for what these

standards should specifically look like (Bosson & Vandello, 2011). With these vague standards come feelings of emasculation and deficiency, which can lead to psychological strain for men who are trying to assimilate to gender roles (Rudman & Fairchild, 2004; Willer et al., 2013). When men do not live up to these subjective ideals, they are punished by being pushed into the female aspect of the gender dichotomy (Dahl et al., 2015; Pascoe, 2007). Hypermasculinity is borne out of this constant strain and anxiety surrounding being associated with females, as it is the extreme opposite of being feminine (Mosher & Sirkin, 1984; Pascoe, 2007). Due to the subjectivity yet necessity of its performance, masculinity is precarious and men risk being considered feminine if they do not publicly enact masculine tropes (Bosson & Vandello, 2011; Dahl et al., 2015). Hypermasculinity can be seen throughout society, such as in the resistance to feminism (Mansfield, 2007), in the perpetuation of violence against women (St. Lawrence & Joyner, 1991), and increasingly in the actions and behaviors of politicians (Mishra, 2018). Conformity to societal masculine norms and the desire to be seen as masculine are also both linked to various psychological factors such as gender role strain, negative self-esteem, and the drive for muscularity (see Ryan, Morrison, & McDermott, 2010). These findings suggest that there is a fundamental issue with the way society deals with gender, not only in the gender binary that it considers to be normative, but also in the danger of perpetuating hypermasculinity as something positive.

According to *threatened masculinity theory*, hypermasculinity and other extreme forms of performing masculinity came about because of changing gender roles throughout the 20th century, which brought increasing gender equality and social change (Hunt, Gonsalkorale, & Murray, 2013). Consequently, men were left with fewer areas in

which they were dominant, which left them questioning the role of masculinity itself within society (Hunt et al., 2013). Ultimately, the movement away from traditional gender roles led to the now-vague parameters around what defines “masculine” behavior. Consequently, men began to physically compensate for these vague standards, leading to hypermasculinity (Hunt et al., 2013; Ryan et al., 2010) and an overcompensation of masculine behaviors. Research on gender roles has found that masculinity threats differ from femininity threats in that they are more socially based; a man may lose manhood by failing to get a promotion, whereas a woman is perceived to lose womanhood mainly through physical means, such as a hysterectomy (Bosson & Vandello, 2011). With increasingly weak lines dictating where men fell in the social hierarchy, more social accomplishments became necessary for men to demonstrate masculinity, and more weight was put on these accomplishments.

Some research has shown that men overcompensate their masculine performances following a threat (e.g., Glick, Gangl, Gibb, Klumpner, & Weinberg, 2007; Willer et al., 2013). The *masculine overcompensation theory* asserts that, following a threat to masculinity, men will retaliate in the form of being overly masculine so as to reinstate their standing in the gender hierarchy (Willer et al., 2013). The precariousness of masculinity can lead men to overcompensate even with a threat as slight as being told that they are less masculine than the average man (Glick et al., 2007; Willer et al., 2013). Additionally, following these threats, men explicitly report more masculine attitudes, such as dominance over women and homophobia (Glick et al., 2007; Willer et al., 2013), both tenets of hypermasculinity.

Research on masculinity threats has consistently linked threats to aggressive reactions in men, suggesting that aggression is an effective way to restore masculinity in the eyes of others in that it allows men to assert dominance and power over an outgroup (Bosson & Vandello, 2011; Dahl et al., 2015). However, it is important to note that one's gender is not the sole predictor of hypermasculine tendencies or aggressive reactions when threats are perceived. Masculinity, though not bestowed upon men at birth, is also not something embodied only by men (Pascoe, 2007; Reidy, Shirk, Sloan, & Zeichner, 2009). Research on masculinity has consistently shown that women and other genders score positively on masculine measures as well (e.g., Reidy et al., 2009). Additionally, while gender, gender roles, and masculinity are all predictors of aggression, masculinity consistently predicts aggressive traits better than other predictors (Kogut, Langley, & O'Neal, 1992; Reidy et al., 2009). While men are not the only individuals who may possess masculine traits, they are significantly more likely than women to view aggression as acceptable (Basow et al., 2007), to enact aggression as a means to prove and restore manhood (Bosson & Vandello, 2011), and to cause harm through aggression (Fox & Fridel, 2017). Furthermore, the acceptance of violence against women is a predictor of the likelihood of rape or use of sexual coercion in men (Briere & Malamuth, 1983; St. Lawrence & Joyner, 1991). Therefore, while men are not the only social group to aggress, it is important to target them in hypermasculinity and aggression research as they have the potential to benefit the most from intervention strategies.

Though threatened masculinity theory has been linked to hypermasculinity and other forms of masculine performance, such as the drive for muscularity (see McCreary & Sasse, 2000), there is also evidence that men may refrain from overcompensating their

masculinities following a threat. While hypermasculinity is linked to the notions of power and strength, gender role theory asserts that men should not be overly concerned with their performance, as it is considered narcissistic, vain, and effeminate (De Visser et al., 2009; Hunt et al., 2013; Pascoe, 2007). *Gender role theory* is grounded in our social constructions of gender, and posits that men and women occupy different roles within society and are judged and viewed negatively when they diverge from these expectations (Harrison & Lynch, 2005). Therefore, by reverting to physical and verbal retaliation following a threat, and diverging from set behavioral expectations, a man risks being seen as less masculine and losing power. Research on the drive for muscularity has shown that men may actually back down from exhibiting masculine tropes following a threat (e.g., Hunt et al., 2013). When asked about their perceptions of their own and ideal body shapes, men self-reported a desire to be less muscular following a threat to masculinity and had less confidence in their physical abilities than those who were not threatened (Hunt et al., 2013).

Other research that focuses on men's social perceptions of themselves, rather than physical perceptions, has found evidence that both supports and conflicts with masculine overcompensation (e.g., Dahl et al., 2015). Men may experience an increased concern about and hyperawareness of others' perceptions of them and an increase in negative affect following a threat to masculinity (Rudman & Fairchild, 2004), a combination that researchers have labeled *public discomfort* (Dahl et al., 2015). For example, across three studies, researchers found a significant rise in men's public discomfort following the threat that they scored closer to a feminine self-concept on a gender knowledge test (Dahl et al., 2015). These results indicate an undercompensation of masculine traits, but men

also reported an increase in anger and other hostile emotions, and greater endorsements of outgroup subordination such as social dominance orientation and benevolent sexism. Therefore, while the men in this study felt discomfort following a threat, they still demonstrated hypermasculine ideologies. Though they did not physically compensate for the threat, the men may have attempted to distance themselves psychologically as much as possible from the feminine side of the gender binary by supporting social dominance and power over women.

The implicit promotion of social dominance ideologies is a powerful and reinforced tool for restoring masculinity, as physical retaliation may not always be appropriate (Dahl et al., 2015). In supporting male dominance hierarchies, men repair their masculinity following a threat and also reduce the agency of outgroups by promoting masculine power (Dahl et al., 2015; Glick & Fiske, 2001). Additionally, the promotion of male dominance hierarchies may be seen as a safer way to prove masculinity because these systems are the default in society, and therefore are expected in social situations where gender is salient (Ridgeway & Correll, 2004). Gender becomes salient in two main contexts: when actors differ in gender and/or sex, and when certain characteristics or stereotypes of one gender are linked to the social setting, such as a mall or a football game (Ridgeway & Correll, 2004; Ridgeway & Smith-Lovin, 1999). When social situations make gender beliefs salient, hegemonic gender hierarchies also become salient, activating the cultural beliefs that men hold higher status than women and are generally more competent, skilled, and respected (Ridgeway & Correll, 2004). Additionally, these hierarchies enforce male dominance, and the targeting of and violence against women may help maintain this hierarchy (Jewkes et al., 2015).

Hegemony is a form of masculinity that aligns itself to the most accepted type of masculinity in society during a specific time period (Zernechel & Perry, 2017). It is described as a set of values that promotes an intangible position of dominance, usually held by males, that is acquired through passive consensus rather than force (Connell & Messerschmidt, 2005; Jewkes et al., 2015). In the present society, hypermasculinity is synonymous with hegemonic masculinity (Zernechel & Perry, 2017). Hegemonic hierarchies and beliefs are activated over nonhegemonic because hegemony is most likely to be enforced in society by actors that benefit from them, and hegemony is ingrained in social norms and institutions (Connell & Messerschmidt, 2005). Therefore, in contexts where gender is salient, men are expected to promote hegemony, especially when the situation threatens a man's masculinity and he must restore his manhood publicly.

However, although hegemonic masculinity is the ruling form of masculinity in theory (Connell & Messerschmidt, 2005; Ridgeway & Correll, 2004; Zernechel & Perry, 2017), it is not the ruling form in practice (Demetriou, 2001). In reality, hegemonic masculinity is not the norm and is unrealistic to achieve. For example, though having a muscular build and acting tough are both (societally supported) facets of hypermasculinity, not all men look like Arnold Schwarzenegger; yet, many men benefit from seeing these characteristics as positive and not challenging them. By passively supporting hegemonic ideals, but not always physically embodying them, men take on a "complicit" masculinity and still reap the benefits of hegemony (Connell & Messerschmidt, 2005; Demetriou, 2001). Additionally, supporting hegemony without enacting it parallels the choice to promote social dominance hierarchies over enacting hypermasculine tendencies, such as aggression, following a threat.

Another way for men to promote social dominance hierarchies/ hegemony is through passively perceiving masculine acts as acceptable, and therefore not opposing them. By passively supporting hypermasculine principles in a situation, men do not need to determine whether it is socially acceptable to physically prove their masculinity and are safe from possible societal backlash. Even subconsciously, men are motivated by society to align their beliefs with those of hegemony (Demetriou, 2001). In a study assessing perceptions of physical and relational aggression, men and women rated the acceptability and level of aggression of a series of vignettes (Basow et al., 2007). Physical aggression instigated by a man towards a male target was rated as significantly more acceptable and less aggressive/ harmful than physical aggression instigated by a woman. Relational aggression targeted towards a woman was rated as less acceptable overall and more aggressive/ harmful than aggression targeted towards a man. Additionally, women rated all forms of aggression and combinations of target/ instigator gender as less acceptable than men did. These results support previous literature that establishes aggression as a stereotypically masculine trait (e.g., Mosher & Sirkin, 1984), and suggests that men are motivated to promote and align themselves with hegemonic, hypermasculine tendencies more than women (Connell & Messerschmidt, 2005; Demetriou, 2001).

There are many ways to go against standard masculine roles and threaten masculinity, and researchers have attempted to make their studies as externally valid as possible by employing procedures to threaten masculinity that are conceivable outside of a planned, lab setting. For example, most experimental studies on threatened masculinity are based on experimenters' feedback stating to male participants that they are not as

masculine as other men following some activity or questionnaire, or that they are more feminine than masculine (e.g., Dahl et al., 2015; Glick et al., 2007; Hunt et al., 2013; Willer et al., 2013). Though the feedback is bogus and not exemplary of men's actual scores, it reflects real feedback that men may receive from their ingroup and other peers. A key part of male adolescence and adulthood is socially avoiding nonmasculine tropes, such as femininity and homosexuality (Bosson, Prewitt-Freilino, & Taylor, 2005; Pascoe, 2007). To ensure that they are seen as neither feminine nor homosexual, men denigrate peers in their ingroup through "verbal one-upmanship" in a social struggle for dominance, placing nonmasculine labels on other men so that they may avoid being seen as nonmasculine themselves (Pascoe, 2007). However, when experimenters give male participants feedback that they are not masculine in an experiment, the men have no one to place the unwanted label on, resulting in a compulsory need to re-establish their masculinity, especially when there is an audience (Bosson, Vandello, Burnaford, Weaver, & Wasti, 2009).

Other experimental threats to masculinity are more physical in nature, reflecting tasks that individuals may perform in everyday life (e.g., Bosson et al., 2005; Bosson et al., 2009). Threats of this nature are seen as masculine gender role violations because they are stereotypically feminine, causing gender to become salient throughout the activity (Ridgeway & Correll, 2004). In a study assessing displays of physical aggression following a masculinity threat, male participants were asked to either braid the hair of a mannequin or braid a length of rope (Bosson et al., 2009). The participants were then offered a choice of a follow-up activity, either boxing or playing basketball. Participants whose masculinities were threatened and who chose the boxing task hit a punching bag

significantly harder than those whose masculinities were not threatened (Bosson et al., 2009). Additionally, results were similar in a second study where participants were offered a choice between a boxing or puzzle follow-up task. Participants in other studies with the same braiding procedure also reported feeling more anxiety after the hair-braiding task when they were not allowed to hit the punching bag at all (Bosson et al., 2009), and reported more self-conscious discomfort when they were not allowed to reveal their sexual orientation (Bosson et al., 2005). The results suggest that re-establishing one's masculinity is an important part of the masculine proving process, and that men may suffer psychologically when they are not allowed to physically compensate for a threat. Furthermore, the results reinforce Ridgeway & Correll's (2004) theory that the social context of an activity marks whether or not gender and gender roles become salient, as men felt self-conscious and anxious only when the braiding task was gender role-inconsistent (framed as "hairstyling"), as opposed to gender role-consistent (framed as "rope reinforcing"; Bosson et al., 2005).

Though much research has been conducted on hypermasculinity and the violent actions men may perform (e.g., St. Lawrence & Joyner, 1991; Willer et al., 2013), little research has touched on the impact that threats to masculinity have on men's perceptions of violence. The present research expands on threatened masculinity theories by suggesting that public discomfort and pressure on men following a masculinity threat can promote the perception that violence is acceptable. Ultimately, this passive promotion of hypermasculinity can have potentially negative consequences for women and other outgroups. Previous research on the components of hypermasculinity suggests that men who strongly embody hypermasculinity are more likely to aggress in response to

masculinity threats or violations of male gender role norms (e.g., Reidy et al., 2009), yet no study to date has assessed possible passive responses. Additionally, while both physical and ideological promotions of masculinity are seen as acceptable responses in theory, only aggression correlates directly with situations that threaten masculinity and elicit public discomfort (Dahl et al., 2015). Therefore, the present study will assess whether or not hypermasculine men who undergo a threat to masculinity will promote hypermasculinity through the perception of violence as acceptable.

There is also little existing literature on threats to masculinity that do not consist of simple feedback as the threat. While some researchers have attempted to threaten participants' masculinities by having them perform "novel activities" (e.g., Bosson et al., 2009), the activities were highly similar between the experimental and control groups; therefore, the control task may have threatened men's masculinities inadvertently. Instead of hair braiding and rope braiding, the present study uses nail painting as the threatening task and picture painting as the control task. I chose picture painting as the control task under the assumption that it is something that most children do when growing up and it is typically not perceived as a gender-specific activity. The present study also seeks to combine the goals of studies that assess individuals' perceptions of physical aggression (e.g., Basow et al., 2007) with those that threaten their masculinities through unfamiliar, physical tasks (e.g., Bosson et al., 2009).

The present study was designed to examine whether men whose masculinities were threatened would find general acts of violence more acceptable than those who were not threatened. In addition to the acceptability of violence, the study explores whether or not individuals will modify their conceptions of their own future behavior based on how

they perceive the vignettes. More specifically, if participants find the aggressive vignettes to be acceptable, I hypothesize that they will also rate themselves as more likely to behave in the same way. I also hypothesize that the effects of the masculinity threats in each experiment will be more pronounced and significant when participants score higher in the pre-test hypermasculinity measure (Reidy et al., 2009). More specific hypotheses are detailed in the overviews of each experiment. The present study will consist of two experiments: one conducted in a lab setting, and one conducted online. I will therefore be able to analyze whether threats that may come from passively viewing media (Experiment 2) are as effective as direct, in-person threats (Experiment 1), using a large sample that is not limited to one general region of the U.S.

Experiment 1

The first experiment was designed to test how individuals who identify as male perceived physical aggression, following a direct threat to masculinity. I expect a main effect of condition, such that participants in the experimental (masculinity threat) condition will rate aggressive vignettes significantly higher in acceptability (Stewart-Williams, 2002), and have a higher likelihood of acting similarly (referred to as imitable/imitability), than those who are not threatened. Additionally, I expect a main effect of target type (Basow et al., 2007), such that aggressive vignettes that depict female targets will be rated as less acceptable and more aggressive than vignettes with male targets.

Method

Participants and Design

The participants were 13 undergraduates from a small liberal arts college in the Pacific Northwest. Participants all identified as male with a mean age of 20.69 ($SD=5.60$). Participants identified as white (84.6%), Asian (7.7%), and mixed race (7.7%). They were randomly assigned to one of two groups, threatened masculinity ($N=7$) or control ($N=6$), and offered extra credit for their introductory psychology class, fruit, or candy at the end of the study as compensation. The experiment is formatted in a 2 (condition: threat, no threat) x 2 (target type: male, female) mixed design, with vignette type and target type defined as within-subjects variables, and condition defined as a between-subjects variable. As this study concerns only aggressive actions, nonaggressive vignettes served as fillers and were not analyzed.

Materials

Participants first completed a simple demographics questionnaire, assessing their age and race/ethnicity. The demographics questionnaire did not assess gender, as self-identification as “male” was a requirement for participation in the experiment.

Hypermasculinity Index-Revised (HMI-R; Peters, Nason, & Turner, 2007).

The HMI-R is a 27-item scale that measures the extent to which the respondent endorses an overcompensation of a masculine personality, namely hypermasculinity (shown in Appendix A). The measure also reflects the tendency toward physical violence when a masculinity threat is perceived. The measure is set up in a phrase completion format in which participants are prompted with the beginning of a sentence and have to choose between two extremes on a numerical scale to finish the sentence. The scale ranges from 1-10, allowing participants to indicate their level of endorsement of each extreme. High final scores indicate adherence to hypermasculine ideals, such as calloused sexual attitudes toward women, the belief that danger is exciting, and the view of violence as manly. Sample items include “In my opinion... some women are good for only one thing” versus “In my opinion... all women deserve the same respect as men” and “I like... fast cars and fast lovers” vs. “I like... dependable cars and faithful lovers”. Internal consistency for the original measure was $\alpha = 0.90$ (Peters, Nason, & Turner, 2007); in this study, internal consistency was $\alpha = 0.92$. The final score is computed by summing the scores from each of the 27 items and dividing the total by 10 for each individual, resulting in final index scores that range from 2.70 (least hypermasculine) to 27 (most hypermasculine).

Vignettes. I constructed ten vignettes that describe common social scenarios and focus on two characters, either two men or a man and a woman. These vignettes were modified from some of those used in the Basow et al. (2007) study, and others were developed to resemble those used in that study (for examples, see Appendix B). The vignettes were designed to be easily understandable and to be read quickly, with similar word counts between aggressive and nonaggressive sets (aggressive vignettes ranged from 157-220 words, $M = 193$ words; nonaggressive vignettes ranged from 160-225 words, $M = 185$ words). Each vignette described an act of aggression committed by one man towards a target (another man or a woman). Each vignette also had a nonaggressive counterpart, where the story remained exactly the same until the act of aggression. At that point, instead of acting aggressively, the man either walked away or performed some neutral behavior that diffused the tension. Aggressive vignettes and their nonaggressive pairs were divided into two blocks, such that a participant never received the aggressive and nonaggressive version of the same vignette. Thus, participants were given five aggressive and five nonaggressive vignettes, some involving two men and others involving a man and a woman.

Each vignette was followed by three questions. The questions assessed participants' perceptions of the behaviors depicted in the vignettes. Two of the questions were adapted from Basow et al.'s (2007) questionnaire used to assess perceptions of physical and relational aggression. The questions were: (Q1) How acceptable do you consider X's behavior toward Y? (Q2) How aggressive do you consider X's behavior toward Y? and (Q3) How likely would you be to react in the same way X did if you were

in the same situation? Participants responded using 11-point scales ranging from 0 (not at all) to 10 (extremely), with a neutral option in the middle.

Procedure

Participants were tested individually in an empty room. After each participant provided informed consent, they completed the HMI-R questionnaire and began their initial tasks. Participants were randomly assigned to one of two groups, threatened masculinity (experimental) or control. Those in the experimental group were instructed to paint all the nails on their non-dominant hand with a bottle of nail polish for 5 minutes. In the control condition, they were instructed to use watercolors to paint a picture on a blank piece of paper, also for 5 minutes. The participants were required to keep the polish on their fingers for the vignette activity so that they would still see it, but were offered nail polish remover and cotton balls at the end of the vignette activity. Participants were then seated at a computer for the vignette activity. They were instructed to read each vignette in its entirety before moving to the next, and were asked the three questions after each scenario. When participants finished reading and responding to each vignette, they were debriefed, thanked for their participation, and given compensation.

Results

Data Scoring and Cleaning

The results were analyzed in two steps. First, data were analyzed to test two general hypotheses that applied to both Experiment 1 and 2. My first general hypothesis stated that there would be a strong correlation between acceptability and imitability

scores. The second general hypothesis stated that threats to masculinity would have a more significant effect on vignette perceptions when HMI-R scores were high. Then, a series of t-tests were run to compare the effects of the experimental condition with the control condition across the three different vignette perceptions. As mentioned earlier, HMI-R scores were calculated by adding the score from each individual question and dividing the total by 10 to get a corrected score. Scores range from 2.7 to 27, with higher scores indicating more self-identified hypermasculinity ($M = 15.48$, $SD = 3.63$).

Individual vignette scores ranged from 0-10, and composite scores were calculated by adding the answers to each of the vignettes. I calculated acceptability, aggressiveness, and imitability separately in this manner. Scores range from 0-100 for each perception, with high scores indicating either higher acceptability, aggressiveness, or likelihood of acting similarly (see Table 1 for means).

Table 1. Means table for composite vignette perception scores by experimental condition.

Condition	Acceptability	Aggressiveness	Imitability
T	35.14 (11.77)	57.86 (13.18)	31.00 (15.96)
C	28.00 (9.86)	64.50 (11.98)	26.17 (12.75)

Note. T=threatened masculinity, C=control. Composite perception scores were computed by adding scores from both aggressive and nonaggressive vignettes.

While the vignette scenarios had aggressive and nonaggressive counterparts, the nonaggressive versions served simply as fillers, and only the aggressive vignettes were analyzed.

Experiment-General Hypotheses

I ran a bivariate correlation to test my first general hypothesis that acceptability and imitability scores would be strongly correlated in both vignette types (aggressive and nonaggressive). There was a significant, positive relationship between acceptability and imitability ratings in aggressive vignettes, $r(13) = 0.81, p = .001$. This relationship was also found in nonaggressive vignettes, $r(13) = 0.89, p < .001$. Thus, when participants perceived the perpetrators' actions in the vignettes to be acceptable, they also reported a higher likelihood of acting similarly.

My second general hypothesis stated that the effects of the masculinity threats in each experiment would be more pronounced and significant when participants scored higher on the HMI-R. However, I was not able to meaningfully test this interaction because of the small sample size. There was also a range restriction in the data, as none of the participants truly scored "high" or "low" on the HMI-R; they scored in the middle of the scale (the scale ranged from 0-27, but the specific range for this sample was 12-15). In the process of testing for an interaction, I found some meaningful correlations between the dependent measures (see Table 2).

Table 2. Correlations between dependent measures.

Variable	Acceptability	Aggressiveness	Imitability
HMI-R	-.33	.16	-.01
Acceptability	--	-.77**	.86***
Aggressiveness	--	--	-.68*

* $p < .05$, ** $p < .01$, *** $p < .001$

Experiment-Specific Hypotheses

Self-reported perceptions of the acceptability of the perpetrators' actions and participants' likelihood of acting similarly to the perpetrators in the vignettes was measured following either a neutral activity or one that served to threaten masculinity. If threats to masculinity influence perceptions of aggression, I expect acceptability and similarity scores for the vignettes to be significantly higher following a threat when compared to the control condition. An independent samples t-test was run to analyze this hypothesis. The analysis revealed no significant effect of condition on acceptability scores, $t(11) = 1.45, p = .17$. There were unequal variances in the population for imitability scores, violating the assumption of homogeneity of variances. There was no significant effect of condition on imitability scores, Welch's $t(7.37) = 1.28, p = .24$. To double check that the perpetrators' aggressive actions were perceived as such, I ran paired-samples t-tests between aggressive and nonaggressive vignettes. The tests indicated that aggressive vignettes were indeed perceived as significantly less acceptable, $t(12) = -8.81, p < .001$, and less imitable, $t(12) = -5.11, p < .001$, than nonaggressive vignettes (see Figures 1 & 2).

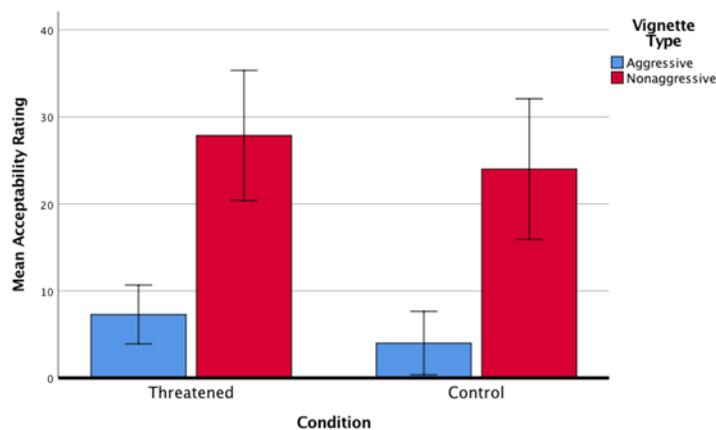


Figure 1. Chart of mean acceptability scores for both types of vignettes, by condition. Error bars represent 95% CI.

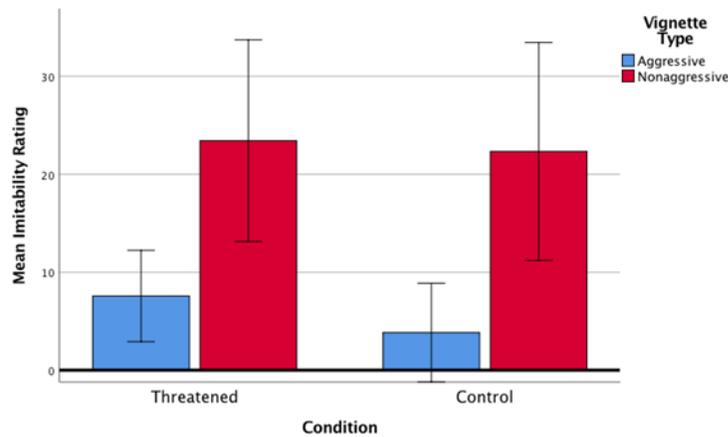


Figure 2. Chart of mean imitability scores for both types of vignettes, by condition. Error bars represent 95% CI.

The next hypothesis stated that aggressive vignettes involving female targets would be perceived as less acceptable and more aggressive than vignettes with male targets, regardless of experimental condition. I ran paired-samples t-tests to test this hypothesis, and found that, although aggressive vignettes with female targets were perceived as somewhat less acceptable ($M = 2.46$, $SD = 2.76$) than those with male targets ($M = 3.31$, $SD = 3.45$), this difference was not significant, $t(12) = -.67$, $p = 0.52$. Additionally, although aggressive vignettes with female targets were perceived as somewhat more aggressive ($M = 21.15$, $SD = 3.83$) than those with male targets ($M = 20.46$, $SD = 5.91$), this was also not a significant difference, $t(12) = .30$, $p = 0.77$.

Exploratory/ Additional Analyses

Two exploratory questions were included in the study; participants responded to them after they completed the experimental manipulation. I designed the first question (M1), “How uncomfortable did the previous activity make you feel?”, to test whether or not painting one’s nails is truly a masculinity threat, because it should theoretically make men significantly more uncomfortable than painting a picture. The second question (M2),

“How consistent is the activity to your identity as a male?”, was designed to achieve the same purpose; if nail painting is truly a threat to masculinity, men in the experimental condition will see it as significantly more inconsistent to their identities than those who painted a picture. I ran independent samples t-tests to test these hypotheses. There were unequal variances in the population for M1, and the t-tests revealed no significant difference between groups, Welch’s $t(7.07) = .270, p = .80$. Men in the experimental condition were not significantly more uncomfortable ($M = 3.29, SD = .49$) than those in the control condition ($M = 3.17, SD = .40$). However, there was a significant difference between groups for M2, $t(11) = 2.32, p = .041$. Men in the experimental condition found their activity to be significantly more inconsistent with their gender identity ($M = 3.43, SD = .79$) than those in the experimental condition ($M = 2.17, SD = 1.17$).

Discussion

The purpose of this experiment was to replicate and extend the findings of previous studies on threats to masculinity and perceptions of aggression, while also combining their methods (Basow et al., 2007; Bosson et al., 2009). I explored whether a tangible threat would influence individuals’ perceptions of how acceptable, aggressive, and imitable men’s actions are by combining Basow and colleagues’ (2007) social vignettes to measure the acceptability and aggressiveness in various perpetrator/ target gender combinations with Bosson et al.’s (2009) use of tangible threats to masculinity. However, few of my major predictions were supported by the data. The only hypothesis that was supported was the first general hypothesis.

My first hypothesis stated that if men found the actions in the vignettes to be more acceptable, they should also report a higher likelihood of acting similarly in the same situation. I found equally high correlations between both perceptions in aggressive and nonaggressive vignettes. The strong relationship between acceptability and imitability may indicate an acceptance of violence and a willingness to reenact it, and will be explored further in the General Discussion.

While these conclusions for the first hypothesis have powerful implications (explored in the General Discussion), my second general hypothesis was not supported. I predicted that the masculinity threat in this experiment (painting nails) would be a more effective threat on men who scored higher, rather than lower, on the masculinity measure, leading hypermasculine men to score aggressive vignettes as even more acceptable, more imitable, and less aggressive. However, separating men into high- and low-HMIR groups produced no significant difference in scores on the perceptions. Additionally, there was no significant main effect of the masculinity threat on any of the perceptions for either type of vignette.

The lack of a main effect of the masculinity threat goes against Bosson et al.'s (2009) findings that tangible threats to masculinity produce an exaggeration of masculine behaviors. While their study involved an active, physical outlet after the experimental manipulation, and mine involved non-active responses to physical behavior, I theorized that passively responding to physical aggression would produce similar results to actively aggressing. Previous research has suggested that part of the masculine proving process involves passively perceiving masculine acts as acceptable (Demetriou, 2001), and I speculated that this passive perception would be an effective way to restore manhood

following a threat. However, physically acting and responding to someone physically acting may not be equally effective strategies to restoring masculinity.

The main effect of vignette type was expected, as one would assume that more aggressive social scenarios will be perceived as aggressive. Additionally, societal roles and expectations dictate that aggression is usually unacceptable and people should not act in aggressive ways, regardless of the gender of the actors. Aggressive vignettes were significantly less acceptable, more aggressive, and had a lower likelihood of repetition than nonaggressive vignettes. However, the lack of a significant difference between experimental groups in the target type analysis is surprising. I expected a main effect of target type, such that aggressive acts performed by a man toward a woman would be rated as less acceptable and more aggressive than those toward another man. My data and results did not support my hypothesis, nor did they align with previously researched masculine norms (discussed further in the General Discussion). More research into how the gender of the target of aggression affects how the act is perceived should still be done.

Finally, my exploratory analysis produced some curious results that may reflect my specific sample, rather than men in general. While men did not find the nail painting task to be significantly more uncomfortable than the picture painting task, participants in the experiment recognized that nail painting is a gender-inconsistent activity. Perhaps, because of the liberal and open-minded climate of Whitman, men find nail painting to be personally less uncomfortable than men in other social climates, but still recognize that it is not consistent with the traditional masculine gender roles.

One of the overarching limitations of this experiment was the small sample size. My a priori power analysis suggested that I would need at least 54 participants to achieve a statistical power of .80 to detect a medium-sized effect; however, my study consisted of 13 participants, achieving a power of only .38. Therefore, I wanted to conduct another experiment with higher power. Additionally, I wanted to explore other ways of threatening masculinity that did not involve bogus feedback or physically performing gender-inconsistent activities.

Experiment 2

Study 2 was designed to assess whether threats to masculinity have the same effect when participants passively view stimuli, rather than receiving feedback or performing an activity. Little research into the effect that viewing media has on one's conceptions of their own masculinity exists, thus this experiment sought to manipulate participants' masculinities by having them view media that could possibly either threaten or affirm their masculinities. The main hypotheses of this experiment were similar to that of the first experiment. However, I also hypothesize that participants in the threat condition will score lower on all measures than those in the threat condition of the first experiment, because direct threats to masculinity will be more provocative than passive threats. Additionally, I hypothesize that participants in a third condition, where their masculinities are affirmed, will rate aggressive vignettes as significantly less acceptable and more aggressive, and will be significantly less likely to behave similarly, than those in the threatened group, as they will not feel the need to overcompensate their masculinities. To reach a greater population, participants were recruited from Amazon MTurk.

Method

Participants and Design

A power analysis was conducted by using G*Power (Faul, Erdfelder, Lang, & Buchner, 2007) software to estimate the sample size necessary to achieve 95% power in order to detect a medium effect size (Cohen's $f = .25$). The a priori analysis yielded a

sample size of 66. However, in order to achieve 99% power, a sample size of 150 was needed. Data from 150 individuals was collected originally, but I had to whittle down the sample size because many workers completed the entire experiment in less than 5 minutes. This timing is impossible because each experimental manipulation lasted 5 minutes, meaning that many of the workers did not watch their assigned video and may have also rushed through the experiment without paying attention to the questions they were asked. Therefore, in the final analysis, there were 65 individual workers recruited from Amazon MTurk, achieving a power of .95; all data cleaning and exclusions were completed a priori.

Thirty participants identified as male (46.2%) and thirty-five identified as female (53.8%). The mean age of the sample was 29.7 ($SD=9.19$). One participant's data was removed from the age analysis due to incomplete data entry. Participants self-identified as Asian (55.38%), white (32.31%), Indian (5.69%), mixed race (3.08%), and Latino (1.54%). Geographically, 22 participants were located in the USA and 43 were located in India. All participants were randomly assigned to one of three groups – threatened masculinity ($n = 20$), affirmed masculinity ($n = 21$), or control ($n = 24$) – upon giving consent and were offered payment through MTurk at the completion of the study. The experiment is formatted in a 3 (condition: threat, no threat, affirmation) x 2 (target type: male, female) mixed design, with similar variable types to Experiment 1. As in Experiment 1, nonaggressive vignettes were not included in the final analysis.

Materials

The materials were the same as those in Experiment 1, except participants watched 5 minute clips of videos instead of painting their nails/ pictures. Participants in the threatened masculinity group watched a clip from the documentary *Tough Guise*, which points out the issues with toxic hypermasculinity in modern society and the media. Participants in the no-threat condition watched a clip from a nature documentary. Participants in the affirmed masculinity condition watched an action scene from *Terminator*. Internal consistency for the HMI-R survey was $\alpha = 0.92$.

Procedure

The procedure for Experiment 2 was largely the same as Experiment 1, except there was no experimenter present. After they were made aware that they would need to complete the entire experiment for compensation and informed consent was provided, participants were directed to the HMI-R survey online. Once they responded to the survey, the video assigned to their condition immediately began to play. After the video clip ended, a page with instructions for the vignette task appeared. Participants were allowed to stay on the instructions screen as long as they wished to ensure that they carefully read the instructions. They then proceeded to read each vignette and respond to the accompanying questions. Afterwards, participants submitted their task to the experimenter, and were compensated after their data was reviewed for completeness.

Results

The results were analyzed in a similar process to Experiment 1, and HMI-R and vignette perception scores were computed similarly to Experiment 1. Mean scores for each perception are presented in Table 3.

Table 3. Means table for composite vignette perception scores by experimental condition.

Group	Condition	Acceptability	Aggressiveness	Imitability
Men only	T	45.60 (17.49)	55.60 (15.00)	39.80 (23.28)
	A	47.55 (22.38)	61.72 (10.18)	46.64 (23.99)
	C	47.56 (24.91)	67.78 (8.29)	47.78 (26.39)
Full sample	T	51.30 (19.62)	58.85 (15.45)	49.50 (22.65)
	A	50.19 (20.25)	59.38 (10.70)	51.42 (20.62)
	C	50.38 (20.36)	60.17 (12.02)	50.75 (19.39)

Note. T=threatened masculinity, A=affirmed masculinity, C=control

A series of statistical tests were first run on the full sample to determine whether there were any significant differences between experimental groups. One-way ANOVAs were used to assess HMI-R scores and age, and found no significant difference between the three groups, all $F_s < 1$. Chi-square tests of independence were used to assess geographic location, gender identity, and ethnicity, and also found no significant difference between the groups, all $ps > .05$. Unlike Experiment 1, Experiment 2 included both male and female participants. Therefore, each hypothesis was analyzed by first isolating just the male participants' responses, followed by an omnibus analysis that included all participants. When analyses that isolated men and analyses of the full sample

are both significant and similar, only the full sample analyses are reported unless otherwise noted.

Experiment-General Hypotheses

Similar to Experiment 1, the general hypotheses were tested first. The first hypothesis stated that if participants find the aggressive vignettes to be acceptable, they should also rate themselves as more likely to behave in the same way. A bivariate correlation was calculated to test this hypothesis, first just for males. The analysis supported the hypothesis, and revealed a strong, positive correlation in aggressive vignettes, $r(30) = .96, p < .001$, and a strong, positive correlation in nonaggressive vignettes $r(30) = .83, p < .001$. Next, the same analysis was conducted for the whole sample. This analysis revealed an equally strong correlation in aggressive vignettes, $r(30) = .91, p < .001$, and a strong correlation in nonaggressive vignettes $r(30) = .71, p < .001$.

The second general hypothesis, that the effects of masculinity threats would be more pronounced and significant when participants score higher in the HMI-R, was not supported in this experiment. I ran a separate 2 (Hypermasculinity level: high, low) x 3 (Condition: threatened masculinity, affirmed masculinity, control) between-groups ANOVA for each perception. The acceptability ANOVA revealed a main effect of hypermasculinity level, $F(1, 59) = 114.20, p < .001$, but no main effect of condition and no interaction, $ps > .05$. The aggressiveness ANOVA revealed no main effects and no interaction, $ps > .05$. Finally, the imitability ANOVA revealed a main effect of hypermasculinity level, $F(1, 59) = 113.44, p < .001$, but no main effect of condition and no interaction, $ps > .05$. Therefore, individuals who reported higher levels of masculinity found the aggressive vignettes to be significantly more acceptable and imitable than those

who reported lower levels of masculinity. I also found significant, positive correlations between the masculinity measure and many of the perceptions (see Table 4).

Table 4. Correlations between all dependent measures.

Group	Variable	Acceptability	Aggressiveness	Imitability
Men only	HMI-R	.57***	.25	.64***
	Acceptability	--	-.002	.94***
	Aggressiveness	--	--	.14
Full sample	HMI-R	.72***	.50***	.69***
	Acceptability	--	.37**	.88***
	Aggressiveness	--	--	.32*

* $p < .05$, ** $p < .01$, *** $p < .001$

Experiment-Specific Hypotheses

The first hypothesis was the same as that of Experiment 1, and stated that threats to masculinity would influence participants to score aggressive vignettes as significantly more acceptable, and have a higher likelihood of acting similarly, than those who were not threatened. A one-way ANOVA was run on the dependent variables of acceptability and imitability to determine whether individuals in the threatened condition perceived aggressive vignettes as more acceptable and imitable than those in the control condition. The test revealed no significant difference between groups for either acceptability or imitability, $F_s < 1$.

Also similar to Experiment 1, paired-samples t-tests were run to test the next hypothesis that aggressive vignettes with female targets would be perceived as less acceptable and more aggressive than vignettes with male targets, regardless of

experimental condition. Again, the t-tests were not significant. Aggressive vignettes with female targets were perceived as somewhat more acceptable ($M = 11.11$, $SD = 7.94$) than those with male targets ($M = 10.83$, $SD = 6.93$), but this was not a significant difference, $t(64) = .39$, $p = 0.70$. Aggressive vignettes with female targets were also perceived as somewhat more aggressive ($M = 17.38$, $SD = 5.69$) than those with male targets ($M = 16.52$, $SD = 5.87$), but this was also not a significant difference, $t(64) = .94$, $p = 0.35$.

The third hypothesis in this experiment stated that individuals in the affirmed masculinity group would rate aggressive vignettes as significantly less acceptable, more aggressive, and less imitable than those who are not threatened, because they will not feel a need to overcompensate. The ANOVA from the first experiment-specific hypothesis was used to test this third hypothesis. The hypothesis was not confirmed, as the analysis found no significant difference between the groups for any of the perceptions, all $F_s < 1$. To double check the aggressiveness scores, which were not included in the first hypothesis' analysis, I ran an independent samples t-test between the affirmed and threatened conditions and again found no significant difference between the groups, $t(39) = -1.05$, $p = .30$.

Finally, a new file was created that combined the data from Experiments 1 and 2 to test the hypothesis that men in the threatened condition of Experiment 2 will score lower on all measures than those in the threat condition of Experiment 1, because direct threats to masculinity will be more provocative than passive threats. I ran independent samples t-tests to test this hypothesis. Levene's test for equality of variances was violated for acceptability, but there was a significant difference between experiments, Welch's $t(24.99) = -4.44$, $p < .001$. Individuals in Experiment 2 found aggressive vignettes to be

significantly more acceptable ($M = 22.85$, $SD = 13.75$) than those in Experiment 1 ($M = 7.29$, $SD = 4.46$). There was also a significant difference between experiments for imitability scores, $t(25) = -2.66$, $p = .013$; individuals in Experiment 2 found aggressive vignettes to be significantly more imitable ($M = 22.35$, $SD = 13.93$) than those in Experiment 1 ($M = 7.57$, $SD = 7.30$). There was no significant difference between individuals in Experiment 2 ($M = 32.75$, $SD = 10.83$) and Experiment 1 ($M = 40.71$, $SD = 6.47$) for aggressiveness scores, $t(25) = 1.82$, $p = .081$.

Exploratory/ Additional Analyses

Similar to Experiment 1, I included two exploratory questions, M1 and M2, after the experimental manipulation. M1 asked participants how uncomfortable the video made them, and M2 asked how consistent they found the video to be with their gender identity. I ran a one-way ANOVA to test between-groups differences on these questions. The ANOVA revealed no significant difference between groups for M1, $F(2, 62) = 1.37$, $p = .26$. However, similar to Experiment 1, there was a significant difference between groups for M2, $F(2, 62) = 3.76$, $p = .029$. Post-hoc Tukey's tests revealed a significant difference between those in the affirmed condition ($M = 2.57$, $SD = .81$) and the threatened condition ($M = 1.95$, $SD = .61$), but not in the control condition ($M = 2.04$, $SD = .91$). Individuals in the affirmed masculinity condition found their video to be significantly more gender-inconsistent than those in the threatened masculinity condition.

Next, I wanted to see whether there was a difference in vignette perceptions between males and females, and ran a series of exploratory independent samples t-tests. The analyses revealed that men found aggressive vignettes to be significantly more

aggressive than women did, $t(63) = 2.12, p = .038$. Women were significantly more likely to act similarly in aggressive scenarios than men, $t(63) = -2.40, p = .019$. There were no significant differences between males' and females' perceptions on nonaggressive vignettes. Independent analyses of target type in the aggressive vignettes revealed that females were more likely than men to act similarly in aggressive situations involving both male targets, $t(63) = -2.09, p = .041$, and female targets, $t(63) = -2.31, p = .024$.

A final exploratory analysis was run based on participants' geographic location. Because different cultures have different standards of masculinity and socially acceptable behavior, I wanted to see if there was a difference between participants in the United States and India, the two locations reported in the data set. Independent samples t-tests were run to explore the differences between HMI-R scores, and each composite perception score. The assumption of homogeneity of variances was violated for the HMI-R t-test, but the analysis revealed a significant difference between scores for men in India and the US, $t(58.74) = -6.61, p < .001$. There were also significant differences between groups for acceptability, $t(63) = -6.78, p < .001$, and imitability, $t(63) = -8.92, p < .001$, but not for aggressiveness, $t(63) = -1.19, p = .24$ (see Table 5 for all means).

Table 5. Means table for composite vignette perceptions according to geographic location.

Group	Location	HMI-R	Acceptability	Aggressiveness	Imitability
Men only	USA	12.65 (1.15)	28.62 (12.45)	59.31 (14.85)	22.77 (11.64)
	India	16.29 (3.34)	60.88 (14.19)	63.18 (9.87)	61.47 (15.63)
Full sample	USA	12.75 (1.33)	32.77 (12.47)	56.91 (12.21)	29.32 (14.20)
	India	16.88 (3.65)	59.72 (16.35)	60.84 (12.74)	61.47 (13.51)

Discussion

The purpose of Experiment 2 was to determine whether my hypotheses from Experiment 1 would extend to an online, more diverse, population. A majority of the studies published in psychology draw conclusions from Western, educated, industrialized, rich and democratic (WEIRD) samples, which are hardly representative of the global population (Henrich, Heine, & Norenzayan, 2010). Furthermore, WEIRD samples often consist of undergraduate psychology students (Arnett, 2008), which may further prevent conclusions the studies draw from being generalizable. Therefore, I attempted to reach a more diverse population by conducting a version of Experiment 1 on Amazon's Mechanical Turk. Additionally, I wanted to examine whether passively viewing media that is intended to threaten masculinity would have the same effect as physically performing a gender-nonconforming task. Therefore, I changed the experimental manipulation from painting to watching short video clips. The experiment included both male and female participants to assess how potential levels of masculinity in females would affect the overall results.

This experiment was the first of its kind to employ passively viewing stimuli as a threat or affirmation to masculinity. However, the video stimuli had no effect on participants' perceptions of the vignettes, indicating that the participants might not have paid enough attention to the video stimuli or even watched them at all. I did not include a true manipulation check to ensure that participants watched their assigned video, and there is no way to tell if they watched each video in its entirety. Therefore, the lack of true experimental manipulation is a likely weakness. This omission should be fixed in

future studies. If the videos were in fact watched, they may not have had a strong enough impact on participants' internalized feelings of their own masculinity.

Similar to Experiment 1, I found strong, positive correlations between the acceptability and imitability perceptions for both aggressive and nonaggressive vignettes. These results held for the entire sample, regardless of participant gender. Unlike the first experiment, however, there were relatively strong correlations between the masculinity measure and all three perceptions in the second experiment, indicating an amplification of the perceptions as individuals identify as more masculine. An unexpected finding is the fact that participants in India scored significantly higher than participants in America on the HMI-R, acceptability, and imitability measures. In terms of the acceptability of aggressive actions, research into global violence has determined that violence in India is much more common than in the United States (Institute for Economics and Peace, 2018). Therefore, it is logical that violence and aggression as forms of retaliation are more accepted in this society.

One of the hypotheses in my second experiment is unique to this study and psychological research in general, as it involves a crossover analysis of data from both experiments. I hypothesized that the threat condition in the second experiment would be less influential than the threat in the first, proposing that passively viewing stimuli is a less effective threat to masculinity than physically performing an activity. Therefore, participants in the threatened condition in Experiment 2 would score aggressive vignettes as less acceptable than those in the threatened condition in Experiment 1. While there was no significant difference between the men's scores in both experiments, including all participants from the second experiment produced a significant difference in acceptability

and imitability scores between the groups. However, contrary to what was hypothesized, participants in the threatened group from Experiment 2 found aggressive vignettes to be significantly *more* acceptable and reported a higher likelihood of acting similarly than threatened participants in Experiment 1. While these results may be due to the differences in sample size and power for each experiment, they also may further provide evidence for cultural differences between the samples, as Experiment 1's sample was taken only in the United States. As stated before, further research should be done to compare different cultural conceptions of masculinity and aggression, and determine how acceptable both are in mainstream cultures.

The exploratory analysis that singled out participant gender also revealed some interesting results that should be explored further. Men found aggressive vignettes to be significantly more aggressive than did women, a finding that is contrary to the results from similar research (Basow et al., 2007). Basow and colleagues (2007) also found that women viewed aggression as significantly less acceptable than men, citing the fact that aggression is a masculine trait; my analysis showed no significant difference between male and female participants in terms of the acceptability of vignettes, regardless of target type. Further research should be done here to determine whether there really is a gendered difference in the acceptability of aggression, as anyone can possess masculine traits.

General Discussion

Aims and Hypotheses

The primary aim of this study was to extend research on masculinity by assessing the effect of threats on perceptions of aggression in a novel way. Previous research that has focused on threats to masculinity has typically used physical outlets to measure the effectiveness of a threat; I chose to have participants read a series of social vignettes and rate how acceptable, aggressive, and repeatable they found the actions. I expected participants with a more masculine self-concept to view violence as more acceptable, as research in social psychology has suggested that individuals tend to conform to others in their behaviors and attitudes and also interpret the behaviors and attitudes of others to prescribed gender roles (Arnett, 2008). Additionally, I expected violence against women to be seen as unacceptable, as societal roles dictate that it is unacceptable to show any kind of aggression towards a woman, especially when a man is the provocateur (Basow et al., 2007; Richardson, 2005).

In the introduction, I outlined some masculine norms that guided my hypotheses. One of hypermasculinity's main components is callousness and dominance over women (Mosher & Sirkin, 1984), either in a physical capacity or by promoting social dominance hierarchies that place men above women (Dahl et al., 2015). Therefore, men who endorse hypermasculinity to a greater extent should exhibit dominance over women, either physically or passively. Yet, research also supports the norms of chivalry, where men are encouraged to refrain from showing aggression toward a woman (Basow et al., 2007; Harris, 1995). Aggression toward a woman should thus be viewed as somewhat

acceptable, especially by those who endorse hypermasculinity, but overall less acceptable than aggression toward a man. Finally, male to male aggression is considered a norm in many situations, and is often encouraged as a form of retaliation (Harris, 1995).

Following a threat, men should be more likely to endorse aggression toward a man to restore their own manhood.

As stated in the introduction, one of the main facets of hypermasculinity is the view of violence as manly and acceptable (Dahl et al., 2015; Mosher & Sirkin, 1984). This facet led to my expectation that aggressive acts would be seen as acceptable, and more likely to be imitated. This hypothesis was confirmed. In both experiments, I found a high, positive correlation between the acceptability of violence and individuals' self-reported likelihood of re-enacting violence in a similar situation. These results could add to the growing research on social comparison theory. Social comparison theory proposes that people tend to automatically compare themselves to others in order to improve their self-evaluations and to set goals (Festinger, 1954). Some research has also suggested that social comparisons may lead to conformity behavior (i.e., Darley, 1966). When a person finds another person or group that they find to be in equal standing, or whose goals match their own, they are more likely to conform to the behaviors of the other (Garcia, Tor, & Schiff, 2013).

This idea of conformity behavior also translates to the desire to be seen as masculine, which could lead to undesirable consequences (Ryan et al., 2010). For example, research suggests that male social comparisons that involve the desire to be seen as more masculine correlate positively with dangerous weight-loss practices, the use of steroids to achieve a hypermuscular physique (Ryan et al., 2010), and many other

facets of hypermasculinity, such as highly competitive and superior attitudes (Garcia et al., 2013). While my study did not assess these dimensions of hypermasculinity or physical reactions to masculinity threats, the correlation I found between acceptability and imitability could serve as a tentative bridge between passive and physical reactions: when *passively* viewing an aggressive action as acceptable, men self-reported a higher likelihood of *actively* behaving the same way. A follow-up study could include separate conditions for both physically and passively responding to a masculinity threat to directly compare these reactions.

In both experiments, I predicted that a threat to masculinity would strengthen this relationship between acceptability and imitability by producing increased ratings in both perceptions; if this prediction was confirmed, it would support the masculine overcompensation theory. The theory posits that, following a threat to masculinity, a man will overcompensate his endorsement of masculine tropes, either by physically demonstrating them or by passively supporting them (Willer et al., 2013). However, there is also evidence that men “undercompensate” their masculinities, in that they display an increase in negative affect and an increased awareness of others’ perceptions of them following a threat (Dahl et al., 2015; Rudman & Fairchild, 2004). If men overcompensate following a threat, I hypothesized that they would find aggressive actions to be significantly more acceptable, less aggressive, and more imitable than those who were not threatened; if they undercompensate, they should score vignettes in an opposite manner. One goal of this study was to discover which body of evidence was supported.

My results proved inconclusive, as there was no significant difference, in either direction, between experimental groups on the three perceptions for either experiment.

For the first experiment, I attribute this lack of statistical significance to a small sample size and the generally open-minded population from which that the sample was selected. According to my a priori power analysis, I needed about four times as many participants as I tested to achieve a power of .80. With a low statistical power, it is much more difficult to detect a significant effect when there is one to detect, making nonsignificant results much more likely. Additionally, some of the participants I tested already had nail polish on their fingers, and were already comfortable with this gender non-conforming activity. Perhaps this fact made the activity's intention less impactful. In the second experiment, there was no true manipulation check for the video stimuli, and no pre-experimental screening of the videos to ensure that they were provocative in the ways they were intended to be, or at all.

Limitations

Experiment 1

My choice of nail painting as a threat to masculinity in Experiment 1 could be a main factor in the threat's ineffectiveness, as it did not make men significantly uncomfortable. However, empirical evidence suggests that painting one's nails is a violation of male gender norms (Edwards, 2010) that prohibit vanity and deemphasize enhancing one's appearance (Hunt et al., 2013). While some men may break these norms and wear black nail polish, colored nail polish is typically seen to be the most feminine, and therefore anti-masculine. I chose to have my participants use bright pink nail polish, possibly the most stereotypically feminine color, to further provoke them, but they did not seem to be threatened. One reason the activity did not meet its intention is that my

sample consisted of students from Whitman, a more liberal-leaning college. Students here may be more accepting of different lifestyles and are generally more open-minded, as evidenced by the fact that a few of my participants already had their nails painted. In future research, a more detailed demographics survey should be given to determine whether political ideology, personal beliefs, sexual orientation, and the like, have an effect on how people perceive gender non-conforming tasks.

Perhaps the most overarching limitation of this experiment was the small sample size. Nail painting may have indeed served as a provocative threat to masculinity, and may have influenced males' perceptions of aggression, but the effect was simply not detectable because of the experiment's low power. Some of the results from the data support this conclusion. For example, although there was no significant difference between them, the mean acceptability scores were numerically larger for the threatened group than for the control group (see Table 1 in the Results section). This pattern is consistent with the overcompensation theory. Similarly, the means for imitability were numerically different in the threatened group and control group, and in the direction hypothesized, but again were not significantly different. Ultimately, my original hypothesis that the threatened group will find aggressive vignettes more acceptable and imitable may be supported with a larger sample, and should be explored further.

Experiment 2

There are a few limitations regarding my use of videos as manipulations to masculinity. In addition to the omission of a manipulation check, the experimental videos simply may not have had strong enough messages. The threatened masculinity group watched a video from the documentary *Tough Guise*, where Jackson Katz discusses the

impact of toxic masculinity and how it is negatively perpetuated throughout society by the media and peer pressure. Instead of seeing this clip as a threat to their own masculinities, participants may have seen this video in more of an educational light and not felt threatened. The affirmed masculinity group watched a clip from *Terminator*, in which Arnold Schwarzenegger breaks into a building and causes chaos to save a woman. While this video was chosen to represent society's encouragement of men saving women and being heroes, there is a chance that participants simply saw the video as entertainment and did not internalize the message.

After completing the exploratory analysis, there is further evidence that the videos truly did not communicate their intended messages. According to the analysis, the affirmed masculinity group found *Terminator* to be significantly more gender-inconsistent than the threatened masculinity group found *Tough Guise* to be. Therefore, *Tough Guise* may not have served as a threat at all, and *Terminator* may have instead served as a threat. While this result could serve as a factor in the ineffectiveness of the experimental manipulation, it should be viewed with skepticism as the experimental manipulation was a between-subjects variable; to truly determine whether each video was viewed as it was intended, a follow-up study should show all three videos to all participants and determine how each one is perceived against the others.

Implications and Future Research

Though it was limited by a small sample size, Experiment 1 should be further extended as it has the potential to add to research on threatened masculinity in a new way. Results indicated that nail painting may have served as an adequate threat to men's

masculinities, yet an effect was not able to be detected. If nail painting is an effective threat, other gender-nonconforming activities should be explored as well. In addition to hair braiding (Bosson et al., 2009) and nail painting, researchers could explore activities such as playing with dolls or interacting with pink objects. Researchers could also look at other dependent variables measured post-threat, such as risk-taking, loss of face, benevolent sexism, or anxiety. Additionally, other research could explore whether threats to masculinity truly change men's perceptions by including pre- and post-test measures of acceptability and imitability ratings. If a man perceives an aggressive behavior to be more acceptable after a masculinity threat when compared to before, a stronger causal link may be seen between threats to masculinity and changing perceptions.

While there are certainly many further directions to be taken from Experiment 1, Experiment 2's novelty and results indicate many more exciting directions for researchers to take. Research comparing cultural conceptions of masculinity is extremely scarce, but Experiment 2 is perhaps the first to compare self-reported masculinity between India and the US. More research into the conceptualizations of masculinity in India should be done to determine if and what cultural differences affect masculinity between the two. Additionally, more research into different cultural conceptualizations of masculinity should be done to determine whether Western questionnaires (such as the HMI-R) appropriately measure what they are intended to measure in non-Western populations.

Additionally, there is little existing research that focuses on passive threats to masculinity, and whether viewing a video leads to the internalization of its message. It is imperative that media is seen as having a psychological impact, because digital media is widespread and a part of mainstream culture in most industrialized societies. More

research must be done in this area to determine whether videos and other passive stimuli have an impact, and how large that impact is, on one's conception of their own masculinity and whether one's perceptions of social interactions change because of the media's influence or another third variable.

In Experiment 2, women reported a higher likelihood of acting similarly in an aggressive situation than men, which is contrary to much research on masculinity and its norms (e.g., Basow et al., 2007; Bosson et al., 2009; Glick et al., 2007). The analysis revealed that women had a higher imitability score regardless of target gender, suggesting that the target of an aggressive action is not as important as the action itself. This result is not a cross-cultural difference in responses to aggressive behaviors, because a post-hoc analysis revealed that the significant differences occurred only between men and women from the US; there were no significant gender differences between participants from India. It is also interesting that imitability scores were significantly higher in women, as previous research has suggested that men are more likely to enact aggression than women. These results suggest that perhaps American culture is changing, and gender roles that indicate passivity as an appropriate response for women and violence as appropriate for men are dissipating.

Despite its limitations, the second experiment provided a novel opportunity to examine cross-cultural differences in aggression perceptions between the US and India. I found that individuals from India scored higher on the masculinity measure, and had higher acceptability and imitability scores, than those in the US. Further research into different cultural conventions of masculinity should be considered, and culture-specific scales of masculinity should be developed. According to the Global Peace Index, India is

the 136th most peaceful country out of 163, while the US is 121st (Institute for Economics and Peace, 2018). While these ranks are certainly not something to be pleased about, they give researchers the chance to perform cross-cultural analyses between countries that are vastly different in terms of peacefulness and to assess possible reasons for the differences. By targeting violence cross-culturally, especially its acceptance, researchers may have the opportunity to affect policy by arguing for the implementation of actions taken by less violent societies.

Though my hypotheses regarding the experimental manipulations were not supported in either experiment, both experiments confirmed my hypothesis that viewing an action as acceptable would also lead to a higher likelihood of acting similarly. This correlation is impactful and has been discussed, but a focus should also be placed specifically on the perception of violence as acceptable. Some researchers are already targeting the acceptance of violence by developing interventions for the bystander effect (e.g., Coker, Bush, Brancato, Clear, & Recktenwald, 2018). Initially, the bystander effect was coined to refer to an individual's likelihood of helping others in a dangerous situation, which may decrease when other, unknown, bystanders are present (Darley & Latane 1968). More recently, its definition has expanded to include individuals' predisposed beliefs and personality characteristics as factors in their likelihood of helping.

Among other conclusions, greater acceptance of rape myths and interpersonal violence is found to be negatively associated with bystander helping actions (Coker et al., 2018; McMahon, 2010). Higher scores on masculinity measures are also negatively correlated with bystander helping (Tice & Baumeister, 1985). Additionally, men report a

higher acceptance of rape myths than women, especially when they belong to social groups such as athletic teams or fraternities (McMahon, 2010). The goal of bystander intervention programs is to motivate individuals to act when they see a problem by dispelling myths, situations, or norms that involve the acceptance and encouragement of violence against others. While men are not the only social group to aggress, they tend to be significantly more likely to act violently than women (Basow et al., 2007; Stewart-Williams, 2002), and more likely to accept violence as a strategy to prove and restore manhood, and should thus be the focus of violence acceptance interventions.

Appendix A

HMI-R Scale

1. my knees feel weak and I shake all over.	2	3	4	5	6	7	8	9	10. I feel high.
---	---	---	---	---	---	---	---	---	------------------

- 1). After I've gone through a really dangerous experience
- 2). I'd rather
gamble than play it safe. play it safe than gamble.
- 3). Call me a name and
I'll pretend not to hear you. I'll call you another.
- 4). In love and war
you should still play by the rules. anything goes.
- 5). When I go to parties
I like wild, uninhibited parties. I like quiet parties with good conversations.
- 6). Some people have told me
I take foolish risks. I ought to take more chances.
- 7). So-called effeminate men
are more artistic and sensitive. deserve to be ridiculed.
- 8). Using drugs or alcohol to "encourage" a woman to have sex with you is
gross and unfair. OK if you can get away with it
- 9). I like
fast cars and fast lovers. dependable cars and faithful lovers.
- 10). So-called prick teasers
should be forgiven. should be raped.
- 11). When I have had a few drinks
I mellow out. I look for trouble.
- 12). Any man who is a man
needs to have sex regularly. can do without sex.
- 13). When I have a drink or two
I feel ready for whatever happens. I like to relax and enjoy myself.
- 14). When it comes to taking risks
I like to play it safe. I'm a high roller.
- 15). In conflicts with others
I win by not fighting. I fight to win.
- 16). Getting into fights
is natural for me. never solves an issue.
- 17). When I feel like fighting I
try to think of alternatives. go for it.
- 18). Given what I know about fighting,
it's just stupid. he who can, fights; he who can't runs away.
- 19). When I'm bored
I watch TV or read a book. I look for excitement.
- 20). I like to
drive safely, avoiding all unnecessary risks. drive fast, right on the edge of danger.
- 21). So-called pick-ups should
expect to put out. choose their men carefully.
- 22). In my opinion
some women are good for only one thing. all women deserve the same respect as men.
- 23). When it comes to having sex
I only want to have sex with someone who is in total agreement. I never feel bad about my tactics when I
have sex.
- 24). I would prefer to be a
famous scientist. famous WWF wrestler.
- 25). Lesbians have a particular lifestyle
and should be respected for it. but really just need a good, stiff cock.
- 26). If someone challenges you to a fight,
there's no choice but to fight. it's time to talk your way out of it.
- 27). If you insult me,
be prepared to back it up. I'll try to turn the other cheek.

Appendix B

Vignette Samples

Aggressive 1

Will and Betty are good friends, and they often hang out together. One night they go out to a party together, and Will hooks up with someone even though he has a girlfriend, Melissa, who is very devoted to him and also happens to be one of Betty's close friends. Later that night, Will tells Betty that he had a great time at the party. Betty says that she saw Will with a new girl and that she thinks that Will should tell Melissa. Will doesn't want to tell Melissa because he is scared that he will lose her. Betty tells Will that Melissa will find out anyway and she feels that she should know. Will is very angry and upset that Betty is acting this way. He confronts Betty and tells her that he is not going to tell Melissa. When Betty keeps insisting that he tell her, Will gets very angry. He starts yelling at Betty and telling her to stay out of his business. They get into a very heated argument. Neither one of them will back down. Eventually, while they are screaming at each other, Will gets so mad that he throws the beer bottle that he is holding at Betty and hits her.

Nonaggressive 1

Will and Betty are good friends, and they often hang out together. One night they go out to a party together, and Will hooks up with someone even though he has a girlfriend, Melissa, who is very devoted to him and also happens to be one of Betty's close friends. Later that night, Will tells Betty that he had a great time at the party. Betty says that she saw Will with a new girl and that she thinks that Will should tell Melissa.

Will doesn't want to tell Melissa because he is scared that he will lose her. Betty tells Will that Melissa will find out anyway and she feels that she should know. Will is very angry and upset that Betty is acting this way. He confronts Betty and tells her that he is not going to tell Melissa. When Betty keeps insisting that he tell her, Will gets very angry. He starts yelling at Betty and telling her to stay out of his business. They get into a very heated argument. Neither one of them will back down. Eventually, Will gets tired of fighting and goes home instead.

Aggressive 2

Kate and John live in the same residence hall and are close friends. Kate's sister is considering traveling abroad to Spain. Because John was in Spain last semester, he lets Kate borrow his pictures to show to her sister. However, Kate tends to be unorganized and somehow loses the pictures. Kate feels terrible and is scared to tell John because she knows that the pictures were important to him and are irreplaceable. When Kate tells John that she lost his pictures, John becomes upset and angry with Kate. That evening Kate gets ready to go out to dinner. Kate, John, and a couple of their friends always go out to eat on that day of the week. At the restaurant, Kate notices that John is acting a little weird and won't look at her or talk to her. She confronts him about it, asking if everything is ok. He stands up, saying he has to use the restroom, and she tries to get up to follow him and continue the discussion. Instead he gives her a nasty look and kicks the chair she's sitting in away from him, knocking her over.

Nonaggressive 2

Kate and John live in the same residence hall and are close friends. Kate's sister is considering traveling abroad to Spain. Because John was in Spain last semester, he lets

Kate borrow his pictures to show to her sister. However, Kate tends to be unorganized and somehow loses the pictures. Kate feels terrible and is scared to tell John because she knows that the pictures were important to him and are irreplaceable. When Kate tells John that she lost his pictures, John becomes upset and angry with Kate. That evening Kate gets ready to go out to dinner. Kate, John, and a couple of their friends always go out to eat on that day of the week. At the restaurant, Kate notices that John is acting a little weird and won't look at her or talk to her. She confronts him about it, asking if everything is ok. He tells her that he is upset about the pictures and that he is really tired from classes, but that he forgives her.

References

- Anderson, C. A., & Bushman, B. J. (2002). Human aggression. *Annual Review of Psychology, 53*, 27-51.
- Arnett, J. J. (2008). The neglected 95%: Why American psychology needs to become less American. *American Psychologist, 63*(7), 602-614.
- Basow, S. A., Cahill, K. F., Phelan, J. E., Longshore, K., & McGillicuddy-DeLisi, A. (2007). Perceptions of relational and physical aggression among college students: Effects of gender of perpetrator, target, and perceiver. *Psychology of Women Quarterly, 31*, 85-95.
- Bosson, J. K., Prewitt-Freilino, J. L., & Taylor, J. N. (2005). Role rigidity: A problem of identity misclassification? *Journal of Personality and Social Psychology, 89*(4), 552-565.
- Bosson, J. K., & Vandello, J. A. (2011). Precarious manhood and its links to action and aggression. *Current Directions in Psychological Science, 20*(2), 82-86.
- Bosson, J. K., Vandello, J. A., Burnaford, R. M., Weaver, J. R., & Wasti, S. A. (2009). Precarious manhood and displays of physical aggression. *Personality and Social Psychology Bulletin, 35*(5), 623-634.
- Briere, J., & Malamuth, N. (1983). Self-reported likelihood to sexually aggressive behavior: Attitudinal versus sexual explanations. *Journal of Research in Personality, 17*, 315-323.
- Buss, A. H., & Perry, M. (1992). The aggression questionnaire. *Journal of Personality and Social Psychology, 63*(3), 452-459.

- Centers for Disease Control and Prevention. (2017). *Preventing intimate partner violence*. Retrieved from <https://www.cdc.gov/violenceprevention/>.
- Coker, A. L., Bush, H. M., Brancato, C. J., Clear, E. R., & Recktenwald, E. A. (2018). Bystander program effectiveness to reduce violence acceptance: RCT in high schools. *Journal of Family Violence, 34*(3), 153-164.
- Connell, R. W., & Messerschmidt, J. W. (2005). Hegemonic masculinity: Rethinking the concept. *Gender & Society, 19*(6), 829-859.
- Dahl, J., Vescio, T., & Weaver, K. (2015). How threats to masculinity sequentially cause public discomfort, anger, and ideological dominance over women. *Social Psychology, 46*(4), 242-254.
- Darley, J. M. (1966). Fear and social comparison as determinants of conformity behavior. *Journal of Personality and Social Psychology, 4*(1), 73-78.
- Darley, J. M., & Latane, B. (1968). Bystander intervention in emergencies: Diffusion of responsibility. *Journal of Personality and Social Psychology, 8*, 377-383.
- De Visser, R. O., Smith, J. A., & McDonnell, E. J. (2009). "That's not masculine": Masculine capital and health-related behaviour. *Journal of Health Psychology, 14*(7), 1047-1058.
- Demetriou, D. Z. (2001). Connell's concept of hegemonic masculinity: A critique. *Theory and Society, 30*, 337-361.
- Diaz, J. (2018, August 3). *How the U.S. is getting more violent, by the numbers*. Retrieved from <https://www.fastcompany.com/90212938/the-u-s-is-getting-more-violent-by-the-numbers>.

- Edwards, N. M. (2010). Using nail polish to teach about gender and homophobia. *Teaching Sociology, 38*(4), 362-372.
- Ellsberg, M., Arango, D. J., Morton, M., Gennari, F., Kiplesund, S., Contreras, M., & Watts, C. (2015). Prevention of violence against women and girls: what does the evidence say? *The Lancet, 385*(9977), 1555-1566.
- Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*(2), 175-191.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations, 7*, 117-140.
- Fox, J. A., & Fridel, E. E. (2017). Gender differences in patterns and trends in U.S. homicide, 1976-2015. *Violence and Gender, 4*(2), 37-43.
- Garcia, S. M., Tor, A., & Schiff, T. M. (2013). The psychology of competition: A social comparison perspective. *Perspectives on Psychological Science, 8*(6), 634-650.
- Glick, P., & Fiske, S. T. (2001). Hostile and benevolent sexism as complementary justifications for gender inequality. *American Psychologist, 56*(2), 109-118.
- Glick, P., Gangl, C., Gibb, S., Klumpner, S., & Weinberg, E. (2007). Defensive reactions to masculinity threat: More negative affect toward effeminate (but not masculine) gay men. *Sex Roles, 57*, 55-59.
- Gramlich, J. (2019). *5 facts about crime in the U.S.* Retrieved from <https://www.pewresearch.org/fact-tank/2019/01/03/5-facts-about-crime-in-the-u-s/>.

- Harris, M. B. (1995). Ethnicity, gender, and evaluations of aggression. *Aggressive Behavior, 21*, 343-357.
- Harrison, L. A., & Lynch, A. B. (2005). Social role theory and the perceived gender role orientation of athletes. *Sex Roles, 52*(3/4), 227-236.
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). Most people are not WEIRD. *Nature, 466*, 29.
- Hilburn, R. L. (Interviewer), Simons-Rudolph, J. (Interviewee), & Smiler, A. (Interviewee). (2016). *Hypermasculinity – The Origins, Effects, and Antidotes* [Interview transcript]. Retrieved from WHQR website:
<http://whqr.org/post/coastline-hypermasculinity-origins-effects-and-antidotes#stream/0>
- Hunt, C. J., Gonsalkorale, K., & Murray, S. B. (2013). Threatened masculinity and muscularity: An experimental examination of multiple aspects of muscularity in men. *Body Image, 10*(3), 290-299.
- Institute for Economics and Peace. (2018). *Global Peace Index*. Retrieved from
<http://visionofhumanity.org/app/uploads/2018/06/Global-Peace-Index-2018-2.pdf>.
- Jewkes, R., Morrell, R., Hearn, J., Lundqvist, E., Blackbeard, D., Lindegger, G., ... Gottzén, L. (2015). Hegemonic masculinity: combining theory and practice in gender interventions. *Cult Health Sex, 17*(2), 96-111.
- Kogut, D., Langley, T., & O'Neal, E. C. (1992). Gender role masculinity and angry aggression in women. *Sex Roles, 26*(9/10), 355-368.
- Mansfield, H. C. (2007). *Manliness*. New Haven, CT: Yale University Press.

- McCreary, D.R., & Sasse, D.K. (2000). An exploration of the drive for muscularity in adolescent boys and girls. *Journal of American Health, 48*, 297-304.
- McMahon, S. (2010). Rape myth beliefs and bystander attitudes among incoming college students. *Journal of American College Health, 59*(1), 3-11.
- Mishra, P. (2018). The Crisis in Modern Masculinity. Retrieved from <https://www.theguardian.com/books/2018/mar/17/the-crisis-in-modern-masculinity>.
- Mosher, D. L., & Sirkin, M. (1984). Measuring a macho personality constellation. *Journal of Research and Personality, 18*(2), 150–163.
- O'Donnell, C. R. (1995). Firearm deaths among children and youth. *American Psychology, 50*, 771–776.
- Pascoe, C.J. (2007). *Dude, you're a fag: Masculinity and sexuality in high school*. Berkeley, CA: University of California Press.
- Peters J., Nason C., & Turner W.M. (2007). Development and testing of a new version of the hypermasculinity index. *Social Work Research, 31*, 171–182.
- Reidy, D. E., Shirk, S. D., Sloan, C. A., & Zeichner, A. (2009). Men who aggress against women: Effects of feminine gender role violation on physical aggression in hypermasculine men. *Psychology of Men and Masculinity, 10*(1), 1-12.
- Richardson, D. S. (2005). The myth of female passivity: Thirty years of revelations about female aggression. *Psychology of Women Quarterly, 29*, 238-247.
- Ridgeway, C. L., & Correll, S. J. (2004). Unpacking the gender system: A theoretical perspective on gender beliefs and social relations. *Gender & Society, 18*(4), 510-531.

- Ridgeway, C. L., & Smith-Lovin, L. (1999). The gender system and interaction. *Annual Review of Sociology*, 25, 191-216.
- Rudman, L. A., & Fairchild, K. (2004). Reactions to counterstereotypic behavior: The role of backlash in cultural stereotype maintenance. *Journal of Personality and Social Psychology*, 87(2), 157-176.
- Ryan, T. A., Morrison, T. G., & McDermott, D. T. (2010). Body image investment among gay and bisexual men over the age of 40: A test of social comparison theory and threatened masculinity theory. *Gay & Lesbian Issues and Psychology Review*, 6(1), 1-19.
- St. Lawrence, J. S., & Joyner, D. J. (1991). The effects of sexually violent rock music on males' acceptance of violence against women. *Psychology of Women Quarterly*, 15, 49-63.
- Stewart-Williams, S. (2002). Gender, perceptions of aggression, and the overestimation of gender bias. *Sex Roles*, 46(5/6), 177-189.
- Thompson, J. K., & Cafri, G. (2007). *The muscular ideal: Psychological, social, and medical perspectives*. Washington, DC: American Psychological Association.
- Tice, D. M., & Baumeister, R. F. (1985). Masculinity inhibits helping in emergencies: Personality does predict the bystander effect. *Journal of Personality and Social Psychology*, 49(2), 420-428.
- Willer, R., Conlon, B., Rogalin, C. L., & Wojnowicz, M. T. (2013). Overdoing gender: A test of the masculine overcompensation thesis. *American Journal of Sociology*, 118(4), 980-1022.

Zernechel, A., & Perry, A. L. (2017). The final battle: Constructs of hegemonic masculinity and hypermasculinity in fraternity membership. *College Student Affairs Leadership*, 4(1), article 6.