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EFFECTS OF GENDER ROLE VIOLATIONS ON HYPERMASCULINE MEN'S
AGGRESSION IN A LABORATORY PARADIGM

by

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This thesis, submitted by Hannah M. Borhart in partial fulfillment of the requirements for the Degree of Master of Science from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

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Hannah Marie Borhart
July 26, 2012

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ABSTRACT

Research on gender roles has indicated that men who adhere strongly to their masculine identity are more aggressive than their less traditional counterparts and that their aggressive tendencies tend to be amplified when they encounter others who violate traditional gender roles. There have been few studies that examined the relationship between hypermasculinity and gender role violations without the use of sexual orientations as the violations and no laboratory studies directly comparing a hypermasculine man's aggression towards a gender role violating man and a gender role violating woman. In this study, forty-five men competed in a laboratory aggression paradigm against a traditional or gender role violating "opponent". In addition, several other variables were examined in relationship to both hypermasculinity and aggression. The correlations found were generally consistent with the relevant literature; however, the aggression results showed an unexpectedly high level of aggression towards traditional, feminine females in both high and low hypermasculine males.

CHAPTER I

INTRODUCTION

According to 2007 FBI crime statistics, men commit approximately three-quarters of violent crime in the United States. Statistics from that year also indicate that men committed the majority of homicides, nearly all rapes and sexual assaults and approximately three-quarters of assaults, both aggravated and simple. Violent aggression perpetrated by men is a serious problem in the United States and because of this, the relationship between aggression and gender has been extensively studied. Consistent with the FBI's crime data, one of the most invariable findings in the field of aggression is that men are both the perpetrators and targets of more aggression than women (Harris, 1992, 1995, 1996; Baron & Richardson, 1994). The discoveries from this field attempt to relate variables to the perpetration of aggression in the hopes of predicting and reducing aggressive and violent behaviors in those who are most at risk.

The extant literature defines aggression as any behavior enacted by an aggressor toward a target with the immediate intent to cause harm. Additionally, the aggressor must believe that the behavior will cause harm to the target individual who will be motivated to avoid this harm (Anderson & Bushman, 2002; Bushman & Anderson, 2001; Baron & Richardson, 1994; Berkowitz, 1993; Geen, 2001). Aggressive behavior can be classified as either direct or indirect. Direct aggression is harm caused by an aggressor to a target in a face-to-face interaction. Examples of direct aggression are yelling at or

hitting a target. Indirect aggression involves harm caused indirectly; the aggressor often remains anonymous, as in the case of a rumor (Richardson & Green, 1999). Aggression is a daily occurrence in the United States, thus society and the mass media readily provide many examples of both indirect and direct aggression.

Researchers have created many theories to explain the mechanisms that motivate aggression. The Cognitive Neoassociation Theory explains aggressive behaviors through the use of aversive events that produce negative affect (i.e., frustrations, provocations, loud noises, etc.) activating various responses associated with fight or flight and feelings of anger or fear. These feelings are linked in memory to various behavioral tendencies that make aggression more likely (Berkowitz, 1989, 1990, 1993). The Social Learning Theory posits that aggressive behavior is learned through direct experience or vicariously (Bandura, 1983, 2001). Script Theory has a more specific learning mechanism for aggressive behavior but is similar to Social Learning Theory. In this theory, the mass media is the mechanism by which children learn aggressive scripts. If a child witnesses many instances of aggression on television, that child will develop an aggressive script that can be retrieved later and used as a guide for behavior (Huesmann, 1986, 1998). Excitation Transfer Theory explains aggressive behavior temporally. This theory states that physiological arousal dissipates slowly so if two arousing events occur within close temporal proximity, the arousal from the first event may be mistakenly attributed to the second event making aggressive behavior more likely (Zillmann, 1983). Social Interaction Theory posits that an aggressor will use aggressive or coercive behaviors as a method of producing a certain behavior in the target (Tedeschi & Felson, 1994). These

theories explain certain subsets of aggressive behavior, but none of these theories can explain aggressive behaviors across situations and individuals.

Anderson and Bushman (2002) saw a need to create a more parsimonious model of aggression that would better explain aggressive acts with multiple motives. This model, aptly named the General Aggression Model (GAM), uses the interaction between situational variables and dispositional or personal factors, focusing on the “person in the situation,” to explain how aggressive behavior arises. In other words, aggressive behavior is best understood by assessing the interaction between the aggressor and the immediate situation, which is the interaction between individual differences and situational factors. Individual differences include variables such as gender, attitudes and perceived efficacy: aggressors who believe that they can successfully carry out an aggressive act with the desired outcome in a situation are much more likely to choose to aggress than those who are not as confident. Situational variables include frustration, drug intoxication and provocation (i.e., a threat, verbal insult, physical attack or electric shock). Provocation has been shown to be the most important and influential cause of human aggression (Anderson & Bushman, 2002; Berkowitz, 1993; Geen, 2001). When provoked or faced with a perceived or actual threat of pain, physical or psychological, people seem to be prepared to respond to that threat aggressively (Anderson & Bushman, 2002). In sum, aggression can be best understood by determining how certain individual differences and situational variables interact. The next logical step is determining which variables are most useful in this equation.

One variable that has been extensively studied with respect to aggression is gender: both of the aggressor and the target. A study by Conway, Irannejad and

Giannopoulos (2005) found that men were more aggressive than women for both mild and strong provocation in the laboratory. Research suggests that gender differences in aggression begin in childhood with overt, direct aggression occurring more frequently among boys than girls (Crick, 1996; Huesmann, Guerra, Zelli & Miller, 1992). Men are more likely to be directly aggressive than women, paralleling the finding for children (Baron & Richardson, 1994; Richardson & Green, 1999). In their study of self-reported aggression, Richardson and Green (1999) examined the effects of direct aggression in same-sex and opposite-sex dyads. This study found men and women were both more likely to directly aggress against men and direct aggression is most frequent in male-male dyads. Examining gender differences in victimization confirms this finding. Men are more likely to be the targets of multiple forms of victimization, they are more likely to be perpetrators of victimization and they experienced more aggression than women over their lifetime (Harris, 1992, 1995, 1996). Several theories have been posited for the discrepancy in male aggression towards target males and females. Eagly and Steffen (1986) argued chivalry, or the idea that men should protect the weak and defenseless, or women, is the reason less aggression is directed toward women. This is partially echoed by the finding that physical aggression against women was perceived by college students as more harmful and less acceptable than physical aggression against a man (Basow, Cahill, Phelan, Longshore & McGillicuddy-DeLisi, 2007). Gender differences in the aggressor and the target are examples of individual differences or person variables that can help to explain aggressive behavior in the GAM.

However, understanding simple gender differences in the aggressive behaviors is not sufficient because aggressive acts are based on both individual differences and

situational factors in the GAM. For example, a man who is prone to aggress against women [individual difference] will not be generally aggressive in all situations, but they will target women who have provoked him [situational factor](Anderson, 1996). In fact, men tend to aggress against women who they perceive as threatening (Baron & Richardson, 1994; Hammock & O’Hearn, 2002; Richardson, Leonard, Taylor & Hammock, 1985), despite aggression against women being viewed as harmful and not acceptable (Basow et al., 2007). Furthermore, men are more likely than women to perceive a threat or provocation in neutral or threatening situations. This perception tends to produce a motivation to respond to the situation in an aggressive manner. Men are more likely to feel threatened or provoked, are more likely to respond to provocation or threats with aggression and are more likely to target other men, although, aggressive men may also target threatening women. While gender seems to be useful in predicting aggression, many more individual differences and situational variables interact with gender to produce more robust predictors. One example of these more robust predictors is gender roles: masculinity or femininity. Research has found that while both gender and gender roles predicted aggression, gender roles tend to be better predictors (Hammock & Richardson, 1992; Spence & Helmreich, 1978).

Masculinity or masculine ideology refers to beliefs held by men about the importance of subscribing and adhering to the culturally defined norms of male behavior, which are “rooted in the structural relationships between the sexes” (Pleck, 1995; Pleck, Sonenstein & Ku, 1993). Masculine ideology involves an individual’s endorsement and internalization of culturally defined norms about masculinity and the male gender role. A rigid, strict, overt and exaggerated adherence to masculine ideology has been termed

“hypermasculinity.” As conceptualized by Mosher and Sirkin (1984), hypermasculinity is a personality constellation, characterized by calloused sexual attitudes, the belief that violence is “manly” and the idea that danger and competition are exciting, that predisposes men to engage in physical power and dominance behaviors in interactions (Cohn & Zeichner, 2006, Reidy, Sloan & Zeichner, 2009). Men who exhibit high levels of this personality constellation have a predisposition for aggressive or violent behavior when their masculine identity is challenged or threatened, whereas, men low on hypermasculine traits appear to be less inclined to act aggressively.

Strong endorsement of masculine identity has been shown to be positively and significantly associated with the use of direct aggression because aggression is generally more congruent with masculinity than distress or fear. Physically aggressive behaviors are generally visible, perceived as dangerous and difficult to execute convincingly (Bushman, Baumeister & Phillips, 2001; Cohen & Vandello, 2001; Levant, Hirsch, Celentano, Cozza, Hill, MavRachorn, et al., 1992). Such attributes of physical aggression make engaging in aggressive behaviors an effective way to prove masculinity when faced with a threat (Cohn & Zeichner, 2006; Archer, 2004; O’Neil & Harway, 1997). Vandello, Bosson, Cohen, Burnaford and Weaver (2008) have stated that masculinity, more so than femininity, which seems to be largely determined by biological sex, is difficult to obtain and maintain in westernized societies, particularly the United States, because masculinity seems to be determined through acts and exhibits of “manhood.” Due to this “precariousness” of manhood, any threat to or question of a man’s masculinity will provoke anxiety and negative affect within the individual. When a man’s masculinity is threatened in a laboratory, thoughts of aggression are more easily

accessible, measured by the spontaneous completion of words in hostile and aggressive ways. In light of this, it has been theorized that men who engage in aggressive behavior may use it as a “scripted” coping strategy that is followed to diminish the negative affect associated with conflicts and threats to the masculine ideal held by hypermasculine men (Cohn, Zeichner & Seibert, 2008; Vandello et al., 2008).

The masculine gender identity has been found to consist of four dimensions: competitiveness and dominance used to gain respect and status, an invulnerable appearance or emotional non-expressiveness, anti-gay and anti-feminine attitudes or the avoidance of appearing feminine to others at all costs and gender role stress (Brannon, 1976; Brannon & Juni, 1984). Male perpetrated aggression can result from threats to or violations of any of these four dimensions. Kimmel (1997; 2000) argues to successfully prove and maintain masculinity in the United States, a man is required to be tough, always in control, aggressive and violent when necessary, such as in response to a threat to their masculinity, and, above all, to not be like a woman in any way. Thus hypermasculinity predisposes men to aggress against target women and men who threaten their masculinity by implying that they are in some way “effeminate.”

Both high hypermasculine and low hypermasculine men’s aggressive and violent behaviors toward target others who threaten their masculinity has been explored in the field of aggression. Recently, male perpetrated aggression has been most studied with respect to gay men as targets. This literature has suggested that male aggression toward gay men serves much the same purpose as male aggression in general with the most predominant motives being to assert one’s own heterosexuality and masculinity and to reduce the anxiety associated with the psychological conflicts of gender and sexuality

(Franklin, 2000; Herek, 1986; Kimmel, 2000). A motive not previously discussed but of great importance to the current study is the enforcement of traditional gender norms (Kite & Whitey, 1998; Hamner, 1992). This aggressive enforcement of gender norms can be thought occur with gay men and women, women who threaten the masculinity of a man, women who are not “feminine” enough and men who are not “masculine” enough. Heterosexual men with extreme adherence to masculinity tend to hold negative views of both gay men and gay women, though their attitudes towards gay women tend to be less negative (Kilianski, 2003). Vass and Gold (1995) have reported that high hypermasculine men respond to negative feedback from women with greater anger and aggression than their low hypermasculine counterparts. Furthermore, being criticized or contradicted by a woman may be characterized as a threat to the masculinity of these men and may be especially stressful, allowing these men to access an aggressive reaction more readily (Franchina, Eisler & Moore, 2001).

High hypermasculine men show similar patterns of aggression in self-report and laboratory examinations. In a study by Parrott and Zeichner (2003), hypermasculine men aggressed earlier and at higher shock intensities against a female opponent than did low hypermasculine men. As female opponent’s provocation was in an adversarial context in this study, the threat to the masculinity of the high hypermasculine men might have been more salient. A similar study found exposure to gender normative behavior (i.e., a man and a woman kissing) did not significantly increase aggression in hypermasculine men while exposure to gender role violations (i.e., two men kissing) did. Exposure to gender role violations is suggested to threaten the masculinity of those males with extreme adherence and endorsement of masculine ideology thus increasing anger and aggression

(Parrot & Zeichner, 2008). Similar to men, women perceived to violate gender roles of femininity are also at increased risk to be targets of the aggression of hypermasculine men. Hypermasculine men tend to be more aggressive towards hypofeminine confederates, while their low hypermasculine counterparts demonstrated no differences in aggression between a hypofeminine and a hyperfeminine confederate. The gender role violations of a hypofeminine woman may seem to be a threat to the masculine man's dominance, control and masculinity thus increasing the likelihood of responding aggressively. These authors posited that violence against women and gender role violating men along with the denigration of "feminine" attributes might serve to maintain a high hypermasculine man's perceived social hierarchy and serve to enforce their traditional gender role values (Reidy, Shirk, Sloan & Zeichner, 2009).

Gender roles are heavily socialized from a very young age and thus become very powerful social roles (Richardson & Hammock, 2007). Men are socialized to use aggression and tolerate pain as evidence of their masculinity (Bernardes, Keogh & Lima, 2008). The process of socialization of aggression begins early in childhood. Peer, parents, teachers and others with whom young boys have extensive contact actively encourage them to be aggressive and competitive, suppress tender emotions and feelings while expressing angry emotions. Negative feelings of shame and anxiety are created through this socialization process when deviations from masculine ideals occur (Mahalik, Cournoyer, DeFranc, Cherry & Napolitano, 1998). In addition to internally generated negative affect when boys deviate from the masculine ideal, they are also dealt with and often punished in a harsher manner than girls when deviations occur, further reinforcing the masculine ideal (McCreary, 1994). Both internal and external consequences of

deviation from the masculine ideal have been termed gender role stress (GRS). Put another way, gender role stress is the individual's subjective experience of the degree to which one adheres or does not adhere to the male gender role (Blazina, Pisecco & O'Neil, 2005; Good, Robertson & O'Neil, 1995; Hayes & Mahalik, 2000; Moore & Stuart, 2004). Men can experience masculine GRS from a global self-appraisal in any situation where the culturally defined norms of masculinity are violated, especially in the following five factors: physical inadequacy, emotional inexpressiveness, subordination to women, intellectual inferiority and performance failure (Eisler & Skidmore, 1987). Men high in masculine GRS tend to use violence and aggression as a strategy to reassert dominance over a female who challenges or threatens their masculinity (Eisler, Franchina, Morre, Honeycutt & Rhatigan, 2000; Franchina, Eisler & Moore, 2001; Jakupcak, 2003).

GRS can cause cognitive distortions about masculinity and exaggerated masculine behavior. GRS has similarly been linked to increased levels of direct aggression, misogynistic attitudes and sexual prejudice (Blazina, Pisecco, O'Neil, 2005; Good, Robertson & O'Neil, 1995; Hayes & Mahalik, 2000; Moore & Stuart, 2004). Cohn and Zeichner (2006) found a moderating effect of GRS on masculine identity and aggressive behavior; at high levels of gender role stress, aggression remained stable across levels of masculine ideology. In the same study, moderate effect sizes for masculine identity and gender role stress accounted for approximately 9% and 17% of the variance in aggression, respectively.

For the men with high levels of gender role stress, it seems imperative to expel the feminine attributes and behaviors within themselves, along with feminine threats to their

masculinity. By expelling feminine tendencies and threats, these men are using their hypermasculine defense mechanisms, chiefly aggression, to protect their precarious and fragile masculine self (Vandello et al., 2008; Mahalik et al., 1998). Furthermore, a hypermasculine personality constellation tends to increase GRS. High levels of GRS (and a similar concept gender role conflict) have been shown to be dangerous to the men's emotional and interpersonal health and often the health of others (O'Neil, 2008; 2010), often due to the high levels of aggression predicted by both hypermasculinity and GRS.

When hypermasculine men are faced with gender role violations in another person, that person will generally become a target of aggression, allowing the hypermasculine man to "enforce traditional gender roles" (Kite & Whitey, 1998; Hamner, 1992). Gender role violations occur when a man exhibits traditionally "feminine" traits or when a woman exhibits traditionally "masculine" traits, thus, it is important to know what constitutes a traditional gender role associated with masculinity or femininity. Femininity has been shown to be associated with caring and nurturance (Cacchioni, 2004), submissive behaviors, nicety, compliance, and politeness (Spence & Buckner, 2000; Street, Kimmel & Kromrey, 1995). In contrast, masculinity has been shown to be associated with courage, aggression, physical strength (Edley & Wetherell, 2001), bravery, valor, honor (Hunt, 2008), high-risk taking behaviors, casual attitudes about sex, the belief that women are inferior to men (Reis, 1986), and dominance (Rutherford, 1998). Masculinity has also been shown to predict verbal aggression and anger, whereas, femininity was shown to be negatively associated with both (Kinney, Smith & Donzella, 2001). These adjectives describe a picture of traditional gender roles, but gender roles tend to be conceptualized on a continuum, not a dichotomy, making a

purely feminine woman or a purely masculine man unlikely. Most people will fall somewhere in the middle of the continuum; they will be a mix of masculine and feminine traits. For some, especially hypermasculine men, this mixture of traits can be very threatening.

The less traditional female gender role, or masculine woman, is often associated with the word “feminist” and these two concepts are often used side by side in the literature. Less traditional female gender roles often emphasize assertiveness (Eagly & Steffen, 1986), stubbornness, aggression, anger, radical behaviors and thoughts (Roy, Weibust & Miller, 2009), and nontraditional attitudes (Twenge & Zucker, 1999). These women are often described as tense, egotistical, defensive, bitter, touchy, pushy (Twenge & Zucker, 1999), and domineering (Berryman-Fink & Verderber, 1985). Another word often used in association with feminists and the less traditional gender role is “man-hating” (Kamen, 1991). Self-report studies have examined how respondents evaluate females who violate the traditional roles. Richardson, Bernstein & Hendrick (1980) found that among respondents of both genders, a non-traditional female was evaluated in a relatively positive manner. However, Twenge and Zucker (1999) found that with all male respondents, non-traditional females were evaluated in a neutral to slightly negative way. Reidy, Sloan and Zeichner (2009) had women compete against women who either violated or endorsed traditional gender roles in a laboratory aggression paradigm. In this study, women who violated traditional gender roles, measured by answering questions in a non-conforming manner, were at increased risk for violent victimization and increased risk to be the target of another woman’s aggression. Violating gender roles for women

tends to put them at risk for violent victimization, though in some studies these women were evaluated, at worst, in only a slightly negative way.

Men can break traditional gender roles in a similar way to women; however, the consequences of a non-traditional gender role for men may be much more severe. These non-traditional men or “feminine” men tend to exhibit traditional feminine traits such as emotionality, understanding, caring, kindness and gentleness (Deaux & Lewis, 1984; Kirsch, 2003). Feminine men may also have fewer macho pretensions and may also be more concerned with style (Chrisafis, 2003). Further, they may be more emotionally sensitive than masculine men, which could cause a problem in their relationships with women partners because their partners may be uncomfortable with men who are more sensitive than them (Hill, 2006). Consistent with the GAM, this uncomfortable feeling may lead these women to be more aggressive with their emotionally sensitive male partners. Men also tend to feel uncomfortable with feminine men. Deaux and Lewis (1984) found that men who are perceived as having “feminine” traits and even men who had “feminine” features to their physical appearance were likely judged to be homosexual. In a similar vein, Richardson, Bernstein & Hendrick (1980) found that research participants with traditional gender beliefs found “feminine” men very unlikable. This self-report study summarizes the findings related to the likeability of individuals who portray nontraditional gender roles. Research participants with traditional gender role beliefs were most attracted to masculine males and feminine females, feminine males were met with “extreme derogation” and the masculine female was evaluated less negatively than the feminine males. Participants adhering to non-traditional gender roles themselves did not make differentiations based on gender roles.

The assertion that the preference of hypermasculine men is for traditional gender roles with extreme aversion to gender role violations finds support in these studies.

Masculinity has been found to be associated with a fear of femininity, or strong negative emotions associated with feminine values, attitudes and behaviors (O'Neil, 2008). A fear of femininity has been correlated with heterosexual men's endorsement of sexual prejudice and aggression toward gay men (Parrott, 2009). Walker, Tokar and Fischer (2000) stated that homophobia stems from a man's fear of femininity. This fear of femininity and possible subsequent homophobia is consistent with the increased propensity towards gender-role violating targets by high hypermasculine men. Others have posited that it is perhaps femininity with no supplemental masculine traits that decreases the attractiveness and likeability of feminine men (Hill, 2006). These studies suggest that a bias exists in favor of masculinity and because of this, women may be given more gender role flexibility than men (Seyfried & Hendrick, 1973; Richardson, Bernstein & Hendrick, 1980).

In addition to gender and gender role related variables, many other variables have been linked to aggression in the relevant literature. Five of these variables will be examined in this study with respect to aggression and gender role variables to better understand the risk factors for perpetrating aggression.

First, self-esteem has been linked to aggression, though the relationship is complicated and not well defined. Self-esteem has been conceptualized as an individual's evaluation of internal states and traits relative to their own personal ideal. Baumeister, Smart and Boden (1996) attempted to explain this relationship with a model of "threatened egotism" in which a certain subset of people with high self-esteem become

aggressive or violent when their positive view of themselves has been threatened by others. This model explains aggression in individuals with high but insecure self-esteem. However, individuals who are low in some forms of self-esteem can also be aggressive, as low self-esteem is correlated with interpersonal antagonism and neurotic tendencies, often making aggressive behaviors more likely (Maples, Miller, Wilson, Seibert, Few & Zeichner, 2010). Certain attributes of high self-esteem such as self-perceived superiority and perceptions of social inclusion are more closely linked to aggression than elevated general self-esteem. Webster and Kirkpatrick (2006) found a relationship between self-esteem and aggression that depended on the domain of self-esteem being assessed and that these relationships are stronger when subjects are provoked than when they are not.

Despite seeming parallels between the relationships of self-esteem and aggression and hypermasculinity and aggression, Burk, Burkhart and Sikorski (2004) found that the correlation of self-esteem to hypermasculinity was not significant though slightly negative (between $-.09$ and $-.14$). Many studies have found that threats to the masculinity, along with threats to self-esteem, of some individuals have been closely associated with violent offending and aggression. A combination of low self-esteem and a hypermasculine gender role tends to be predictive of anger and aggression males (Toch, 1969; McCleary, 1973; Tedeschi, 1983). Beesley and McGuire (2009) found it plausible that self-esteem variables have a non-linear relationship with aggression with high or low scoring individuals on self-esteem measures are more at risk for aggressive or violent behaviors than those in intermediate ranges. The correlation between hypermasculinity and self-esteem found by Burk, Burkhart and Sikorski (2004) did not take into account a possible non-linear relationship between self-esteem and aggression. Thus when this

relationship is considered a significant correlation may be found between hypermasculinity and self-esteem.

The second variable is narcissism, defined as a personality trait where a person has an unrealistically high level of self-love and those with narcissistic traits tend to be strongly motivated to maintain both their and others' perception that they are a superior person. Throughout the literature, narcissism has been widely accepted as related to physical aggression despite a relative lack of empirical research. Narcissists are especially susceptible to provocation through a threat to self-esteem (Baumeister et al., 1996). In response to this salient type of provocation, narcissists will use aggression in order to maintain his or her unrealistically favorable self-impression (Bushman & Baumeister, 1998). The relationship, if one exists, between hypermasculinity and narcissism has not been examined.

Third, executive functioning deficits have been related to the genesis of aggressive and violent behaviors in many studies. Specifically, a meta-analysis from 2000 indicated that the effect size of executive functioning on antisocial behavior was in the "medium" to "large" range (Morgan & Lilienfeld). Giancola (2004) found that men low in executive functioning shocked participants in a laboratory aggression paradigm at significantly greater intensities and had a greater proportion of extreme aggression than did men high in executive functioning. Hoaken, Shaughnessy and Pihl (2003) found similar relationships between aggression and executive functioning. To the author's knowledge, the relationship between trait hypermasculinity and executive functioning has never been explored.

Fourth, the relevant literature has consistently found that witnessing aggression during childhood increases the likelihood of both sustaining and perpetrating aggression in adulthood. Social Learning Theory would suggest that this is due to children imitating or modeling their aggressive behaviors after their parents' aggressive behaviors (Bandura, 1973). Modest correlations (.26 - .35) have been found between aggression received during childhood and self-reported adult aggression in college men by Chermack and Walton (1999). Jankowski, Leitenber, Henning and Coffey (1999) found that a much higher percentage of respondents who reported witnessing abuse as a child perpetrated aggression as adults. In other words, respondents who witnessed parental violence were more likely to report physical aggression than those who had never witnessed parental aggression. Similarly, Henning, Leitenberg, Coffey, Bennett and Jankowski (1997) found that respondents who had witnessed physical aggression as children were more likely than respondents who had not to display externalizing symptoms of poor psychological adjustment as adults.

Finally, maternal alcoholism has also been correlated with adult aggressive behaviors. Over the last fifty years, women's drinking has been consistently linked to disrupted marital and family functioning, more so than men's drinking (Curlee, 1967; Gomberg, 1976; Perodeau, 1984; Jacob & Seilhamer, 1991). Adult children of alcoholics have been found to have increased marital conflict, decreased marital satisfaction and decreased family cohesion (Domenico & Windle, 1993). The effects of parental alcoholism are greatest when adult men with alcoholic mothers are the aggressors. Kearns-Bodkin & Leonard (2008) found the highest levels of husband-to-wife physical

aggression occurred when the man's mother was an alcoholic and the man's father was not an alcoholic.

Current Study

College-aged men recruited from a large midwestern university completed a series of questionnaires, including a hypermasculinity-screening questionnaire, took part in a standardized laboratory-based aggression paradigm. These men believed they were competing against an opponent in a competitive "reaction-time" task. The "competitor" in this task was a gender role-violating male (i.e., feminine man), a gender role-violating female (i.e., masculine woman), a gender role-conforming male (masculine male) or a gender role-conforming female (i.e., feminine female). These groups have never been directly compared in the literature in a laboratory setting. It is important to replicate self-report findings and to discover if, in the lab, hypermasculine men will differentially aggress against men and women who violate gender roles. It is also important to determine how the additional variables relate to both hypermasculinity and aggression. This information could have important implications for helping aggressive men by determining how certain person variable and situational variables can interact to increase the likelihood of aggression. A better understanding of how these variables interact with each other will help to identify men at high risk of becoming aggressive and can inform certain therapies and can help to more effectively and efficiently help these men understand and reduce their aggression, since hypermasculinity and aggression are shown to be hazards to the health of these men and others around them. Reducing these hazards will be very useful to the men most affected by this personality constellation and everyone with whom these men interact.

Hypotheses

The first hypothesis for this study is that there will be a main effect of hypermasculinity. Specifically, men who are higher in hypermasculinity based on the total score of the ADMI will be more aggressive than men low in hypermasculinity across all conditions. The second hypothesis is an interaction effect between hypermasculinity of the participant and the gender and gender role of the opponent. Participants high in trait hypermasculinity will be most aggressive towards opponents who violate gender roles than those who conform to gender roles. Furthermore, they will be more aggressive towards men opponents than women opponents. Consistent with this hypothesis, feminine females will be aggressed against significantly less than all other opponents. Conversely, participants low in trait hypermasculinity will not aggress differently against gender role violating opponents and gender role conforming opponents.

Finally, the other variables will be examined with respect to hypermasculinity and aggression to determine the effect, if any, they have. Several of these variables such as high self-esteem, maternal alcoholism, executive functioning deficits, abuse exposure, narcissism and gender role stress will likely be positively correlated with aggression. Hypermasculinity will likely be positively correlated with self-esteem and gender role stress. No hypotheses are made about the relationship between hypermasculinity and maternal alcoholism, executive functioning or abuse exposure.

CHAPTER II

METHODS

Participants

Participants were recruited through the psychology department's online survey software (SONA), classroom announcements in undergraduate psychology courses and flyers placed throughout the psychology building. One hundred and forty-eight undergraduate men, aged 18-40, completed part one of this study, ninety of whom agreed to be contacted for participation in part two. Those ninety participants were contacted via email and asked to participate in part two by scheduling an hour span of time to come into the lab. Half of them scheduled a time to participate and complete part two.

Instruments

Demographic form – Participants in part two completed a brief demographic form assessing age, race-ethnicity, sexual orientation, relationship status, education level and average yearly income.

Deception Aid – All participants completed a deception aid questionnaire that measured gender identity. Most completed this questionnaire during part one but a small minority completed it at the time of the reaction-time task. The participants were told that both they and their competitor during the reaction-time task in part two of the study would fill out this form, in order to “get to know each other better” prior to playing the reaction-time game. This form was adapted from the *BEM sex role inventory* (BEM;

Bem, 1974). Fifty-eight items from the BEM, excluding two items involving aggression and competition, were answered on a dichotomous scale asking the respondents to endorse one trait or another (i.e., not at all independent or very independent) on a five-point scale. A femininity score was calculated by averaging responses on the items within the femininity subscale and a masculinity score was calculated by averaging responses within the masculinity subscale for each participant. The respondents also answered four short answer questions at the end of the form such as, “If your best friend were asked to describe you in three words, what would he/she say?” The ostensible opponent gave standardized answers as either a feminine female or male or a masculine female or male. The feminine male and female forms were the same. The masculine male and female forms were also the same. During part two, the experimenter gave the participant’s form to his opponent and retrieved the opponent’s form for the participant to read. The experimenter told the participant that the form is to allow him to learn a little about his opponent prior to the beginning of the task. This form served to convince the participant that there was an opponent in the adjoining room and to inform the participant of the gender identity of his opponent.

Hypermasculinity Screener – Men’s exaggerated sense of conformity to heterosexual masculine gender role norms and behaviors, also known as “hypermasculinity,” was measured using the *Auburn differential masculinity inventory* (ADMI-60; Burk et al., 2004). All participants completed the ADMI-60, which consists of 60 items rated on a five-point Likert-type scale with anchors ranging from A (*not at all like me*) to E (*very much like me*). This scale is broken down into 5 factors: hypermasculinity, sexual identity, dominance and aggression, conservative masculinity

and devaluation of emotion. Burk et al. (2004) found overall reliability for the ADMI-60 was .85. The authors also reported that the ADMI-60 was significantly correlated with Mosher and Sirkin's (1984) Hypermasculinity Inventory (HMI) at $r = .70$ ($p = .01$). All item scores were summed to calculate a continuous total score for analyses. In Burk et al. (2004), the overall Cronbach's alpha was .93. Each participant's total score was used to create two groups, split by the median score, for the second part of the study.

Gender Role Stress – All participants also completed the *male gender role stress* scale (MGRS; Eisler & Skidmore, 1987). The MGRS is a 40-item scale designed to assess men's experience of stress associated with cognitive, behavioral and environmental events related to the male gender role. The respondents rate how stressful they would anticipate an event being on a 6-point Likert-type scale from 0 (not stressful) to 5 (extremely stressful). The items are scored on the following domains: physical inadequacy, expressing "tender" emotions, being placed in subordination to women, having their intellectual control threatened and failing in work and sex. Overall, males score higher on the MGRS than do females (Eisler & Skidmore, 1987), masculine gender role stress is associated with greater cardiovascular reactivity in men (Lash, Eisler & Schulman, 1990) and masculine gender role stress is positively predictive of men's self-reports of anger and anxiety (Eisler, Skidmore & Ward, 1988) all of which support the construct validity of the measure. Validity of the measure is also supported by findings of positive correlations between MGRS scores and measures of Type A behavior and hostility (Watkins, Eisler, Carpenter, Schechtman & Fisher, 1991). Finally, the MGRS has demonstrated good internal consistency (alpha coefficients in the low .90s; Eisler, Skidmore & Ward, 1988; Thompson, 1991).

Maternal Alcoholism – To assess maternal alcoholism, all participants completed the *children of alcoholics screening test* (CAST; Jones, 1981). The CAST is a 29-item self-report screening tool widely used for assessing parental alcoholism among many different age groups. The respondent was asked to indicate whether each item corresponded to their mother (M) or father (F), neither (N) or both (B) during their childhood. A cutoff score of six is recommended by the developers because it corresponds to a DSM-IV diagnosis of alcohol dependence with a sensitivity of 78 percent and a specificity of 98 percent (Charland & Cote, 1998). Strong reliabilities have also been reported (in the .90s).

Self Esteem – Self-esteem was assessed in every participant with two questionnaires. The first questionnaire, the *Rosenberg self-esteem scale* (RSES; Rosenberg, 1965) is a widely used 10-item global measure of self-esteem. Items are rated on a 5-point scale ranging from 1 (strongly agree) to 5 (strongly disagree). Reliability estimates in previous research range from .72 to .88 (Byrne & Shavelson, 1986; Dobson, Goudy, Keith, & Powers, 1979; Fleming & Courtney, 1983; Orme, Reis, & Herz, 1986; Schmitt & Bedeian, 1982; Ward, 1977; Wylie, 1989). Furthermore, test-retest reliabilities have been reported as good for one-week (.82) and for seven-month (.67) intervals (Byrne, 1983; Silber & Tippett, 1965).

The second questionnaire used was the *interpersonal support evaluation list* (Cohen, Mermelstein, Kamarch & Hoberman, 1985) was used in this study as a six-item measure used to assess perceptions of social inclusion. This form asks participants to respond to prompts on a five-point Likert-type scale from 1 (strongly agree) to 5 (strongly disagree). Scores were computed as a total sum score. The items used in this

study were chosen due to the mention of feelings of social inclusion, similar to what was done in Webster and Kirkpatrick (2006).

Narcissism – Narcissism was measured for all participants using the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979). The NPI is a 40-item, forced choice, self-report questionnaire used to assess narcissism as a personality characteristic in non-clinical populations. Participants were presented with a list of statements (e.g., “Modesty doesn’t become me”) and asked to indicate whether that item is true or false for them. All items were summed for an overall narcissism score. Raskin and Hall (1981) reported an 8-week, alternate form retest reliability of .72 and scores on the NPI have been found to be correlated with disinhibition, experience seeking and boredom susceptibility (Emmons, 1981).

Experienced Aggression – All participants who completed part two of the study answered questions about the frequency of witnessed and experienced aggression during their childhood using the *violent experiences questionnaire* (VEQ-R; King, 2002). The VEQ-R provides face-valid estimates of the frequency of parental aggression, experienced or observed by the participant, between the ages of 5 and 19. The VEQ-R is comprised of ten items selected to sample common acts of parental anger directed toward either the participant or a parent during upbringing. This form also includes a measure of these acts directed toward the participant by a sibling or a bully in childhood. Frequency counts (calculated from a nine-point rating scale, from A, “never happened,” to I, “happened more than once a week”) for five of these ten actions are calculated from retrospective participant accounts and used to generate subscale scores for family conflict (minor disagreements and heated verbal arguments) and aggression (pushing/shoving,

striking/punching and threats of physical violence during heated arguments). VEQ scores range from 0 to 365 indicating the number of average days per year during upbringing that the specific act was either observed (between parents) or directly experienced (delivered by either a parent, a sibling or a bully). All participants classified as high in Experienced Aggression report in excess of nine incidents per year of being pushed, shoved, struck, punched or threatened with physical violence during heated arguments. King (2002) reports that roughly 8% of college students and 16% of hospitalized chemical dependency inpatients met this criterion. In this same study, Experienced Aggression scores were found to have acceptable six-week test-retest reliability, $r(86) = .86, p < .001$. Individuals generating elevated (>9 incidents per year) Experienced Aggression scores infrequently (.5%) recanted their recollections of parental abuse in retesting.

Executive Functioning – Executive functioning was measured for all participants using the *executive function index* (EFI; Spinella, 2005). This is a 27-item questionnaire that asks respondents to rate how well each statement describes them on a scale from 1 (*Not at all*) to 5 (*Very Much*). This scale has been shown to have five factors: empathy (alpha = .76), strategic planning (alpha = .70), organization (alpha = .75), impulse control (alpha = .69) and motivational drive (alpha = .70). The Cronbach's alpha for total score was shown to be acceptable (alpha = .82). The scale's validity has been shown by positive correlations with age and education and it has been correlated acceptably with objective measures of brain structure and function (see Spinella (2005) for a full review).

Aggression Measure – Aggression was elicited and assessed using a modified version of the Taylor Aggression Paradigm (TAP; Taylor, 1967). Participants in the

second part of the study competed against an ostensible opponent in an adjoining room in a reaction-time task. In reality, the opponent was fictional and all shocks delivered to the participant were set in a standardized, predetermined order by the experimenter.

Participants were seated in front of a computer with keys numbered from 0 (no shock) to 10 (highest level of shock) that allowed the participant to shock their “opponent” if they won the “reaction-time” trial.

The TAP is a widely used, standardized laboratory measure of aggression because it resembles natural-type situations in which the participants know that their opponent has an opportunity to retaliate aggressively. The TAP has shown construct validity because individuals shown to be more aggressive in general are also more aggressive in this paradigm. On the other hand, generally non-aggressive individuals are less aggressive when completing this paradigm. Further, this paradigm has shown discriminant validity. The TAP does not correlate with measures of competition which some have speculated are confounded with the aggression aspect of the measure because the experimenter tells the participant they are competing against an opponent. Finally, the TAP has demonstrated convergent validity since it correlates with other measures of aggression (Giancola & Zeichner, 1995; Bernstein, Richardson & Hammock, 1987)

Manipulation Check – After completing the TAP, participants in part two completed a post-task questionnaire designed to measure the participants’ belief that they were playing against an opponent and to assess if the participant understood the gender role of the opponent. This questionnaire asked participants to answer questions such as, “describe the personality and some characteristics about your opponent” and “do you

think your opponent was fair/reasonable,” etc. Participants who indicated that they did not believe they were competing against an opponent were removed from the analyses.

Procedure

Participants were prescreened for hypermasculinity using the psychology department’s online research tool, SONA. Immediately following completion of the ADMI-60, participants also completed the MGRS, modified BEM, self-esteem questionnaires, NPI, EFI and CAST. Participants were also asked if they wished to be contacted for participation in the second phase of the study. If they consented, the participant was contacted via email to participate and placed into one of two groups based on a median split of the total ADMI score. These participants were then scheduled for a time to come to the lab to complete the TAP. Upon arrival to the lab for the second part of the study, participants completed an informed consent form, the demographic form, and the VEQ-R. Upon completion of these questionnaires, the experimenter left the room, presumably to retrieve the deception aid questionnaire from the other participant. Once the experimenter returned with the other participant’s deception aid, the participant was given time to read over the “opponent’s” BEM. The participants were told that this questionnaire was to help them get to know their opponent. This deception aid was standardized across participants depending on the experimental condition (feminine female, feminine male, masculine female and masculine male).

After reading about their “opponent,” the participant was sat in front of a computer upon which they participated in the TAP. The electrodes that delivered a small electrical shock were placed on the pointer and middle finger of the participants’ non-dominant hand and then their individual shock tolerances (the lowest perceptible shock to

the highest comfortable shock) were assessed. The computer divided the range of shock intensities assessed into ten equal increments. After the participants' shock range intensity had been determined, the experimenter read scripted instructions to the participant. Before the reaction-time task began, the experimenter left the room once more to "check that the opponent is ready to begin." Once the experimenter returned, any further questions were answered and the aggression paradigm/reaction-time competition began.

Each trial began with the computer telling the participant to press the spacebar and hold it down. The computer then told the participant to "release the spacebar" as fast as they can. If the participant "won" they chose a shock intensity to deliver to their opponent and if the participant "lost," a shock ostensibly assigned by their opponent was delivered to the participant by the computer. The shock intensity chosen by the "opponent" was indicated on the computer screen. There were twenty "reaction-time" trials in total. The first two trials were a baseline measurement of aggression that the participant won, the next eight trials were the "low provocation" condition (shock intensities ranging from 1-4) and the participant won and lost four trials in a predetermined order, the next two trials were transition trials that the participant lost (shock intensities of 5 and 6) and the final eight trials were the "high provocation" condition (shock intensities ranging from 7-10) and again the participant won and lost four trials in a predetermined order. The order of wins and losses was standardized across participants and was predetermined by the experimenter. The dependent variable for the experiment was mean shock intensity in each condition. The computer on which the participant completed the "reaction-time" task also completed all data recording.

Following the “reaction-time” task, participants were given a questionnaire to assess their perceptions of the personality of their opponent and his or her “aggressiveness/competitiveness” to determine if the manipulation was successful. The participants were then debriefed, were given a choice to be awarded research credit for their psychology course or ten dollars in cash and thanked for their time.

CHAPTER III

RESULTS

Means and standard deviations for hypermasculinity, self-esteem, social inclusion, narcissism, total abuse, executive functioning, masculinity, femininity and masculine gender role stress were computed for the present sample and are presented in Table 1. Total abuse was calculated only for respondents who participated in phase two of the study because it was measured with the VEQ-R. Of these participants 13.3% had never experienced abuse of any kind prior to age 16. The distribution of each variable was examined and all were approximately normal.

Table 1. Means and Standard Deviations of hypermasculinity, self-esteem, social inclusion, narcissism, total abuse, executive functioning, masculinity, femininity and masculine gender role stress.

	<i>Mean</i>	<i>SD</i>
Hypermasculinity	91.03	28.734
Self Esteem (RSES)	21.28	5.327
Social Inclusion	9.92	2.337
NPI	21.95	6.637
Total Abuse	20.21	39.039
Executive Functioning	95.03	11.71
Masculinity	5.09	.768
Femininity	4.44	.658
Masculine Gender Role Stress	78.72	29.292

Note. RSES = Rosenberg Self-Esteem Survey; NPI = narcissistic personality inventory.

A series of one-way ANOVAs were conducted to determine if there were differences between groups of the independent variable, namely the gender and sex role of the ostensible opponent in the TAP. Prior to conducting these ANOVAs, the post-task questionnaire of each participant was examined and those who failed the manipulation

check (i.e., they did not know the gender of their opponent or they suspected there was no live opponent in the other room) were excluded from analysis. This excluded three participants from analysis leaving forty-two participants with which to conduct the following analyses. Further, the remaining participants seemed to fully believe the manipulation. The variables examined to determine if there were significant differences between groups were social inclusion, narcissism, self-esteem, total abuse, age of participant, highest level of school completed by the participant, maternal alcoholism, paternal alcoholism, executive functioning, femininity, masculinity, masculine gender role stress and hypermasculinity. Significant differences between groups were found for highest level of school completed by the participant ($F = 3.050, p = .039$) and masculinity as measured by the BEM ($F = 2.902, p = .046$). Post Hoc Tukey tests for highest level of school completed found that the feminine male opponent group completed approximately one and a half more years of school than the feminine female opponent group ($p = .028$). For masculinity, Post hoc Tukey tests showed that participants who had masculine female opponents were more masculine than those participants who had masculine male opponents. This could present a problem when examining the effects of masculinity on aggression; however, with more participants, it is likely that these differences will become non-significant due to random assignment of groups. Further, there is no theoretical basis for this difference.

Correlations between masculinity, femininity, masculine gender role stress, hypermasculinity, executive functioning, self-esteem, maternal alcoholism, paternal alcoholism, narcissism, social inclusion and total abuse were calculated to examine possible relationships between variables. Femininity, masculinity, masculine gender role

stress and hypermasculinity were standardized because the differences between raw scores are not interpretable. Standardizing these scores make comparisons more meaningful both within and between variables. These correlations are presented in Table 2. The variables of social inclusion and total abuse were not significantly correlated with any other variable. The correlations obtained were largely expected from a review of the relevant literature. However, in the present sample masculinity and hypermasculinity were not correlated, contrary to many findings in the literature. This suggests that the BEM measure of masculinity and the ADMI measure of hypermasculinity may be measuring different and possibly unrelated constructs.

Table 2. Correlations of hypermasculinity, self-esteem, social inclusion, narcissism, total abuse, executive functioning, masculinity, femininity, maternal alcoholism, paternal alcoholism and masculine gender role stress.

	<i>M</i>	<i>F</i>	<i>MGRS</i>	<i>HM</i>	<i>EF</i>	<i>SE</i>	<i>MA</i>	<i>P</i>	<i>NPI</i>
<i>M</i>	1								
<i>F</i>	.205*	1							
<i>MGRS</i>	NS	-.242**	1						
<i>HM</i>	NS	-.43**	.427**	1					
<i>EF</i>	.554**	.357**	-.303**	-.504**	1				
<i>SE</i>	.502**	NS	-.29**	NS	.473**	1			
<i>MA</i>	-.186*	-.262**	NS	.236**	-.244**	-.322**	1		
<i>PA</i>	NS	-.208*	NS	.168*	NS	NS	.469**	1	
<i>NPI</i>	.261**	-.181*	.261**	.448**	NS	NS	NS	NS	1

Note. M=Masculinity, F= Femininity, MGRS=masculine gender role stress, HM=hypermasculinity, SE=self-esteem, MA=maternal alcoholism, PA=paternal alcoholism, NPI=narcissism score. * $p < .05$, ** $p < .01$

Prior to examining the role of hypermasculinity on aggression, the individual difference variables and the three levels of aggression were correlated. None of the

variables were significantly correlated with baseline levels of aggression. At low levels of provocation, aggression was significantly correlated with masculine gender role stress ($r = .300, p < .05$), hypermasculinity ($r = .322, p < .05$) and narcissism scores ($r = .356, p < .05$). Finally, only masculine gender role stress was significantly correlated with aggression at high levels of provocation ($r = .304, p < .05$). These correlations are consistent with the relevant literature. Higher levels of masculine gender role stress and hypermasculinity have been found to be related to higher levels of aggression.

Next, the post-task questionnaire was examined to determine how the participants reacted to the personality and perceived the aggressiveness of their opponent. Participants whose opponent was a feminine female were divided as to whether their opponent was aggressive or not (six said she was and five said she was not) and when asked to describe her personality their answers reflected traditional feminine personality traits such as “nice and shy,” “caring and understanding” and one participant even stated that “I could tell it was a girl because right away she gave me a low shock.” Similarly, those participants who faced a feminine male opponent were divided as to his aggressiveness with four stating that he was and seven stating that he was not. The participants also seemed to have conflicting views of his personality stating that he was “easy to get along with” but also that he “sounded reserved/kind/helpful but does not express like he should and it comes out in subliminal ways.” When faced with a masculine opponent, either male or female, participants overwhelmingly believed the opponent was aggressive. In both cases, nine participants stated the opponent was aggressive or very aggressive and only one participant thought that the opponent was not aggressive. This finding is interesting because whether the participant faced a feminine

or masculine opponent, the aggressiveness was prearranged to be identical. However, the participants did react to the personalities of the masculine male and masculine female differently. The participants found the masculine male to be “kind of a loner,” “cocky,” and someone who “liked to push boundaries;” whereas they found the masculine female to be “courteous but not a pushover.” One participant also stated that she “wants to show that she can be and do as well as any man” and another said that “she wanted to inflict to most amount of pain.” These statements not only show that participants believed they were competing against an opponent, but also that they reacted to each type of opponent in different and expected ways.

To test the first hypothesis, a repeated measures ANOVA was conducted with three levels of provocation, the aggression variable, as the within-subjects variable and two levels of hypermasculinity, split by the median, as the within subjects variable. Figure one shows the marginal means plots for this test. This ANOVA showed no significant differences between men low in trait hypermasculinity and men high in trait hypermasculinity. This does not support hypothesis one.

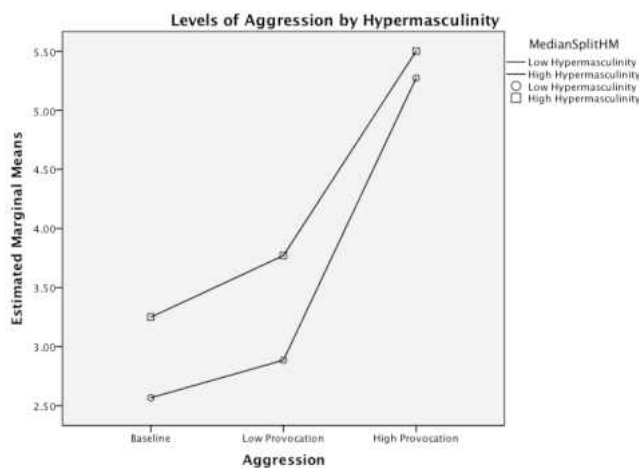


Fig. 1. Levels of aggression split by hypermasculinity

Next, the effects of opponent gender and opponent sex role, collapsed across other conditions, on aggression were tested separately using repeated measures ANOVAs, with aggression as the within-subjects variable. The ANOVA for gender of opponent tested positive for significant sphericity ($p = .042$) so the Greenhouse-Geisser epsilon adjustment was used (.557). Aggression alone was significant ($F = 21.915, p = .001$, partial eta squared = .814). This is illustrated in figure 2. Neither gender of opponent nor the interaction between gender of opponent and aggression were significant. This finding does not match the relevant literature findings that men will be aggressed against more than women.

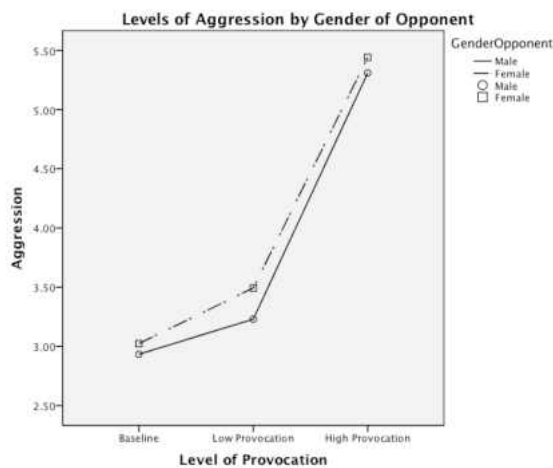


Fig. 2. Effect of gender of opponent on aggression.

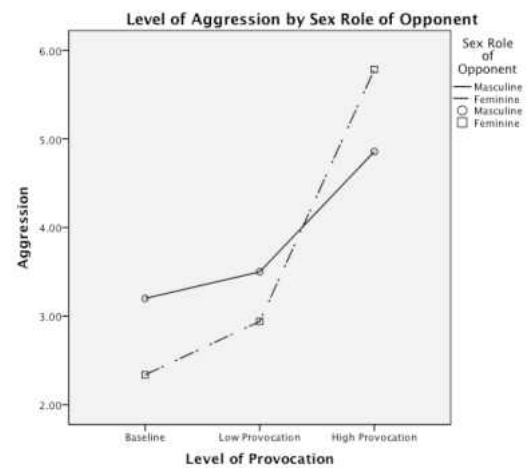


Fig. 3. Effect of sex role of opponent on aggression

The ANOVA for sex role of opponent also tested positive for significant sphericity ($p = .017$) so the Greenhouse-Geisser epsilon adjustment was used (.592). Aggression alone was significant ($F = 27.131, p = .001$, partial eta squared = .772). However, the interaction between aggression and sex role of opponent approached

significance. This interaction is illustrated in figure 2. At baseline and low levels of provocation, the participants in this sample aggressed more against masculine opponents and at high levels of provocation, the participants aggressed more against feminine opponents. This partially matches the findings in the literature that say men should aggress against masculinity more than femininity. However, this interaction may also partially support the second hypothesis that feminine men will be aggressed against at the highest level by male participants.

In order to examine the interaction between aggression and sex role of the opponent predicted by hypothesis two, another repeated measures ANOVA was run with aggression as the within subjects variable, hypermasculinity and four possible opponents coded using simple contrast coding with masculine male as the reference group as between subjects variables. A median split was used to break hypermasculinity into high and low groups. According to hypothesis two, high hypermasculine men should aggress more against the sex-role violating opponents than would the low hypermasculine men. Once again, the sphericity assumption was violated ($p = .001$) and the Greenhouse-Geisser epsilon adjustment (.717) was used. Neither opponent nor hypermasculinity were significant, though aggression was ($F = 29.053, p = .001, \text{partial eta squared} = .440$). Figures 4 and 5 show the marginal means plots for the effect of opponent on aggression for low and high hypermasculine men.

Contrary to expectations, high hypermasculine men did not aggress more than low hypermasculine men overall. However, they did aggress differently. For low hypermasculine men, post hoc Tukey tests were conducted for both aggression levels and for different opponents. For feminine male and feminine female opponents, low

hypermasculine men were equally aggressive in the baseline and low provocation conditions, but were significantly more aggressive in the high provocation condition ($p < .05$). For masculine female opponents all conditions showed equal aggression. Finally for the masculine males, high provocation evoked significantly more aggression than low provocation, though comparisons of all other conditions showed no significance. When comparing the different opponents for low hypermasculine men the only significant difference found was, under high provocation, feminine males were aggressed against more than masculine females. This is inconsistent with the second hypothesis for this study.

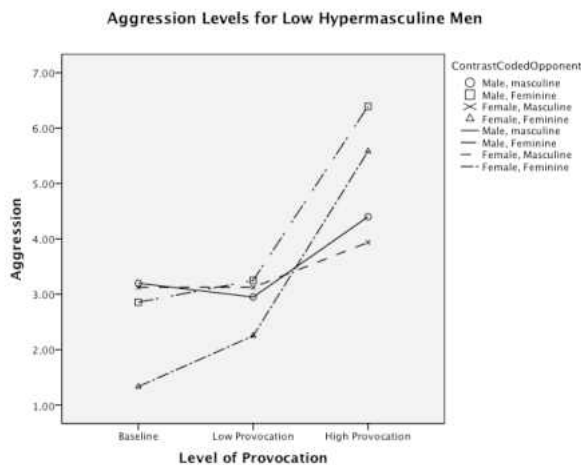


Fig. 4. Effect of opponent on aggression for low hypermasculine men.

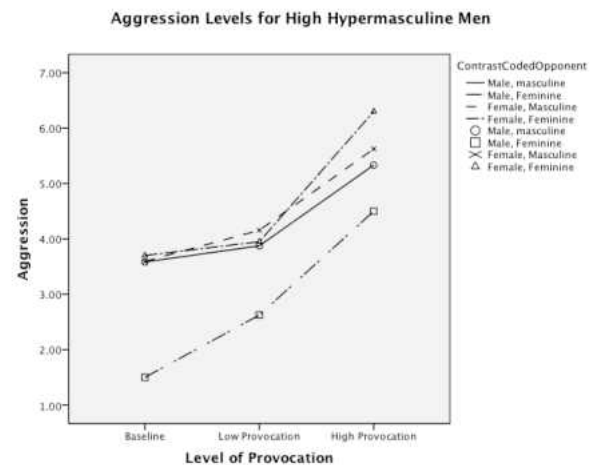


Fig. 5. Effect of opponent on aggression for high hypermasculine men.

Post hoc Tukey tests were conducted in the same manner for high hypermasculine men. Across all opponents, these men aggressed equally in the baseline and low provocation conditions. Further, they aggressed significantly more in the high provocation condition than in the other conditions ($p < .05$). Upon inspection of the difference in aggression between opponents in each provocation condition found no

significant differences. However, as a trend, feminine males were aggressed against less than all other opponents. This is very inconsistent with the second hypothesis of this study.

In some of the relevant literature, masculine gender role stress has been found to be more predictive of aggression than hypermasculinity. If this is the case, it is likely that those with more masculine gender role stress will aggress more against those opponents who violate gender roles, such as feminine males and masculine females. In order to examine this possible link and alternative explanation for the current findings that are inconsistent with the literature, a repeated measures ANOVA was conducted with aggression as the within-subjects variable, the four possible opponents coded with a simple contrast code and masculine gender role stress split at the median to create high and low stress categories. Mauchley's Test of sphericity was significant ($p = .001$) so the Greenhouse-Geisser epsilon adjustment was used (.737). The main effect of aggression was significant ($F = 33.798, p = .001, \text{partial eta squared} = .477$). While the interaction of aggression and opponent type approached significance, no other main effects or interactions were significant.

Figure 6 shows the marginal means plot for men with low masculine gender role stress. This plot shows that aggression levels were quite varied, though not significantly different at baseline and become much closer in the high provocation conditions by opponent. Post hoc Tukey tests were conducted on different levels of provocation. For masculine opponents, both male and female, participants did not aggress differently depending on level of provocation. However, for feminine opponents, participants aggressed more in the low provocation condition than the baseline condition ($p < .05$)

and more in the high provocation than the low provocation condition (feminine male, $p < .01$; feminine female, $p < .05$).

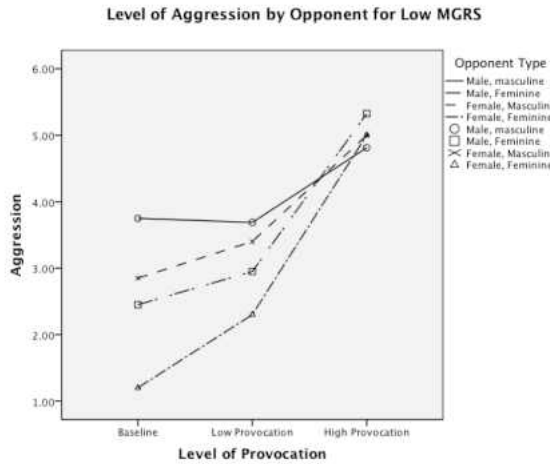


Fig. 6. Effect of opponent on aggression for men with low masculine gender role stress.

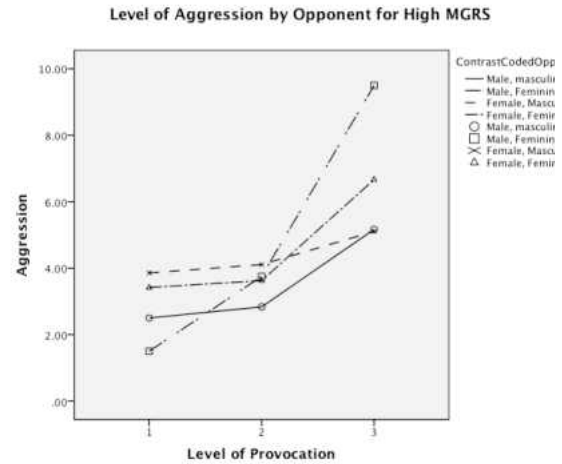


Fig. 7. Effect of opponent on aggression for men with high masculine gender role stress.

Figure 7 shows the marginal means plot for men with high masculine gender role stress. This plot shows that, at baseline and low provocation, participants did not aggress significantly differently towards any of the opponents. However, in the high provocation condition, participants aggressed at significantly higher levels towards the feminine males than the masculine males ($p < .01$). In fact, in this condition, participants nearly aggressed at the maximum possible towards feminine males. Post hoc Tukey tests were conducted on the different levels of provocation. No significant differences were found for the masculine female. For both feminine opponents, participants aggressed more in the low provocation condition than the baseline condition ($p < .05$). They also aggressed more in the high provocation condition than the low provocation condition ($p < .01$). Finally, participants who faced a masculine male opponent did not aggress significantly more in the low provocation condition than the baseline condition; however, they did

aggress significantly more in the high provocation condition than the low provocation condition ($p < .05$). The findings for MGRS were more consistent with the hypotheses of this study but there were some unexpected results within this part of the analysis as well.

The repeated measures ANOVAs for both masculine gender roles stress and hypermasculinity showed an unusual and completely unexpected trend. Participants aggressed at an unexpectedly high level against feminine females in the high provocation condition, and in all cases, levels of aggression in the high provocation condition were significantly greater than levels of aggression in the low provocation condition. This is completely contrary to the hypothesis that feminine females would be aggressed against at the lowest levels across all conditions and will need to be examined further in future research.

CHAPTER IV

DISCUSSION

This study was designed to examine the relationship between hypermasculinity and aggression in situations in which the target of aggression was someone who either conformed to or violated traditional feminine or masculine gender roles. Hypothesis one, that high hypermasculine men would be more aggressive overall than low hypermasculine men was not supported despite the findings in the literature that state the opposite (Cohn & Zeichner, 2006, Reidy et al., 2009). However, while not significant, it does seem, as a trend, that men high in trait hypermasculinity aggressed at higher levels than men low in hypermasculinity, particularly at baseline levels. This may be indicative of a trend that would become significant with more participants, especially since the observed power of this test was only .158.

In the past, when aggression against targets was examined after being broken down into gender of target or gender role of target, it has been found overwhelmingly that aggression against a male target is more frequent and that it is more acceptable to aggress against those with masculine traits (Richardson & Green, 1999, Parrot & Zeichner, 2003). However, in the current study, no significant differences in aggression were found between male and female targets. Further, the assertion that it is more acceptable to aggress against masculine, rather than

feminine, targets was only partially supported. At baseline levels, masculinity was aggressed against more than femininity. However, at high levels of provocation, aggression against feminine targets increased significantly and these opponents became the targets of higher levels of aggression. This finding was further examined when hypermasculinity was added into the ANOVA.

For men high in trait hypermasculinity, hypothesis two was not supported at all. While there were no significant differences between opponents, it was found as a trend that feminine males were aggressed against the least and this may become significant with more participants, while feminine females were aggressed against the most. Hypothesis two with regard to low hypermasculine men was only partially supported because there was one significant difference. However, for both high and low hypermasculine men, there was a large increase in aggression from low provocation to high provocation for the feminine females that was wholly unexpected. This finding is especially surprising considering the recent study by Parrot and Zeichner (2008) that found hypofeminine women are more at risk of aggression than hyperfeminine women from high hypermasculine men. The same study found that hypo- and hyper-feminine women did not have a differential risk of aggression from low hypermasculine men. Neither finding is supported by the trends found within the current study.

One alternative explanation was explored to attempt to understand the unexpected pattern of results. This explanation, that masculine gender role stress is more important than masculine ideology when predicting aggression did not necessarily show a more expected pattern of results (Zeichner, 2006). In fact, when

MGRS was split at the median, it also showed a significant increase in aggression towards feminine females from low to high provocation. Another explanation, that the feminine opponents were possibly seen as more aggressive than masculine opponents, perhaps because of an experimental error, can also be dismissed. When looking at the post-task questionnaires, it is easy to see that both men and women opponents who were masculine were seen as aggressive or very aggressive much more often than female opponents.

In a possible parallel, Berke, Sloan, Parrott and Zeichner (2011) recently found that men who have low conformity to masculine norms are more aggressive toward feminine than masculine females where men who show high conformity do not differ in their aggression toward masculine and feminine females. However, this study only uses an overall aggression score as a measure of aggression and may be missing some of the patterns found in the current study with three levels of provocation relating to aggression, especially at low levels of conformity to masculine role norms. Further, they posited for men who highly conform to masculine gender roles, there may be no difference between a feminine or a masculine woman since she is always in the “outgroup.” This is partially supported in the findings of this study since the difference in aggression toward masculine and feminine women are not significant. However, it would be important to understand why the level of aggression against masculine men is at the same level as aggression against women while aggression against feminine men is so low with this group of men. In Berke et al.’s (2011) line of reasoning, low conforming men are less aggressive towards masculine females because they see them as part of the in-

group, a fellow member of those who have a disregard for traditional gender roles. This assertion is not supported by the findings of this study because at baseline levels, masculine females are the targets of more aggression from low conforming men. Further, it is not until they provoke the low hypermasculine participant at high levels that feminine females elicit high levels of aggression.

One final possible explanation of this might be that merely by shocking the participant at high levels, the feminine female opponent was behaving in an unexpected, non-traditional way and the participants reacted aggressively. On the other hand, when the masculine female opponents shocked the participants, because the participants knew that their opponent subscribed to a more masculine ideology prior to competing against them, higher levels of aggression were expected and thus did not elicit an extreme jump in aggression from the participant. This is in line with the idea of reactance or a hypersensitivity to potential threats to oneself resulting in a tendency to be oppositional (Beutler & Clarkin, 1990; Beutler, Sandowicz, Fisher & Albanese, 1996; Brehm & Brehm, 1981; Dowd & Wallbrown, 1993). In combination with the idea of reactance, Social Interaction Theory could help to explain this extra, unexpected aggression. Men, both low and high in hypermasculinity, have certain expectations of women who display mainly feminine traits. While these women are shocking the participant at relatively low levels, they are following traditional feminine gender roles fairly well; however, when they begin to shock the participants at higher levels, the male participants react to a sudden break from traditional feminine behaviors in an oppositional way: through a dramatic increase in aggression. Following this line of reasoning, the participants

may have been enforcing traditional feminine gender roles by “punishing” the woman who suddenly breaks from her role in an attempt to produce a return to her traditional role. If this alternative explanation were true, the pattern of aggression seen against feminine females in this study should also be positively related to sexism, particularly hostile sexism (Glick & Fisk, 1996).

Limitations and Implications for Future Research

The current study found an unexpected pattern of results that will need to be followed-up and examined further in future studies. These future studies will need to address some of the factors that may limit the generalizability of these results. The largest problem that needs to be addressed is small cell sizes and limited power. Further, the participants used were overwhelmingly Caucasian students at a midwestern university who were enrolled in a psychology course. In order to improve generalizability, it would be important to expand the age range, the race and the geographical location of participants.

In the future, it will be beneficial to examine the relationship between levels of provocation and the results found in this study, through replication, including a measure of sexism and measure of reactance, possibly using a different aggression paradigm. It may also be beneficial to examine female aggression using the same experimental design to determine if women who conform to or violate traditional feminine gender roles will also react similarly to the opponents used in this study. Finally, it would be interesting to see how the pattern of results found in this study change, if at all, when the aggressor knows the target against whom he is aggressing, as in the case of an intimate partner.

Conclusions

In sum, the pattern of results, though unexpected, may have very important implications for understanding who is at the most risk for aggression, not only from high hypermasculine men, but men in general. It has also confirmed several findings in the relevant literature about the characteristics of men who are most prone to violence and raised further questions with several correlations that are not consistent. If these results hold up when the number of participants is increased and power is improved, they may provide some important insights into male aggression. These results may have the biggest implications for the escalation of intimate partner violence because when a feminine female increases from low levels of aggression to high levels, men increase their aggression towards her significantly and disproportionately to their increase in aggression in the other experimental conditions.

APPENDICES

Appendix A
Consent Form, Phase One

INFORMED CONSENT (Phase 1)

TITLE: *The effects of masculine personality traits on reaction time tasks in adult males*

PROJECT DIRECTOR: *Hannah Borhart, Master's Student
University of North Dakota, (847) 702-0582*

THESIS CHAIRPERSON: *Dr. Douglas Peters, Ph.D
University of North Dakota, (701) 777-3648*

STATEMENT OF RESEARCH

This is a research study involving adult males. A person who is to participate in the research must give his or her informed consent to such participation. This consent must be based on an understanding of the nature and risks of the research. This document provides information that is important for this understanding. Research projects include only subjects who choose to take part. Please take your time in making your decision as to whether to participate. If you have questions at any time, please ask.

WHAT IS THE PURPOSE OF THIS STUDY?

You are invited to be in a research study about masculine personality traits and reaction time.

The purpose of this research study is to examine how certain masculine personality traits affect reaction time among adult males (ages 18-40). These questionnaires are screening measures that may qualify you to take part in the second phase of the study.

HOW MANY PEOPLE WILL PARTICIPATE?

Approximately 160 males aged 18-40 will complete a screener questionnaire at the University of North Dakota. This will determine who will be eligible for the second part of the study.

**ATTENTION:* If you have a history of myocardial infarction, cardiac arrhythmias or related cardiovascular disorder, including, but not limited to, use of a pace maker you are not permitted to participate in this study.

HOW LONG WILL I BE IN THIS STUDY?

This study will take part in two sessions. Participation in the screening questionnaires is expected to take approximately twenty minutes. If you qualify and consent to being contacted by the research team, you may be asked to participate in the second phase of the study. The second phase of this research study is expected to take approximately an hour of your time and will involve approximately 60-80 participants.

PROCEDURES

If you agree to be in this study, the following will happen:

- Phase One (the current phase):
 - You will be asked to complete several screening questionnaire.
 - *While taking these questionnaires, you are free to skip any questions that you would prefer not to answer for any reason.*
- You will be asked to provide a contact name, telephone number and email address if you consent to being contacted for further participation in this study.

- You will receive one hour of research credit for completing the screening questionnaire.
- Phase Two:
 - You will be asked to complete a computerized reaction time task against a competitor in an adjoining room involving electrical shocks.
 - During the competition if you lose you will receive a small electrical shock on your middle and index fingers given by your opponent, if you win you will give your opponent a small electrical shock.
 - After completion of this task you will complete another questionnaire.
 - Lastly, you will receive research credit for your time. Completion of all the tasks at the time of the reaction-time task will take 45-60 minutes. Completion of the screener questionnaires on SONA will take approximately 20 minutes.

*You may withdraw from the study without penalty at any time by letting the research assistant know you no longer wish to participate.

RISKS OF THE STUDY

Some questions on the questionnaires may be of a sensitive nature and may make you feel uncomfortable. However, such reactions are typically not viewed as being in excess of “minimal risk.”

If however, you become upset by questions or procedures you may stop participation at any time or choose not to answer a question. If you would like to talk to someone about your feelings about this study, you are encouraged to contact the following resources often for no charge or a nominal fee

- Psychological Services Center (701) 777-3691
- University Counseling Center (701) 777-2127
- UND Student Health Services (701) 777-4500
- Northeast Human Service Center (701) 795-3000

For those who are clients of the behavioral health clinics, please feel free to discuss this distress or concern with your counselor.

BENEFITS OF THIS STUDY

The benefits of this study include the increased knowledge of how masculine personality traits affects a person's reaction time in males. This information may be helpful to professionals in the field and further similar research on these topics.

COST TO PARTICIPATE IN THE STUDY

You will not have any direct costs for being in this research study other than the time involved to complete the procedures.

PAYMENT FOR PARTICIPATING

You will receive 1 hour of research credit in your psychology course for participation in phase one of this study and if you qualify and consent to being contacted, you will receive an additional hour of extra credit in your psychology course for participation in the second phase of this study.

CONFIDENTIALITY

Information gathered from the questionnaires and procedures will be coded with an identification number and your name will not be associated with the data. Consent forms will be kept separately from the data. All materials gathered during this study will be kept securely in a locked file cabinet in a locked room of Corwin/Larimore Hall at UND. Information will be kept for a period of three years, after which the information will be destroyed (shredding paper). The study experimenters (including graduate and undergraduate research assistants working with Hannah Borhart) and people who audit IRB procedures will have access to the data during this 3-year period. You will not be personally identified in any reports or publications that may result from this study. You will be asked to provide a name, telephone number and email address if you wish to be contacted for participation in phase two of this study. Once those names have been compiled and the second phase is complete this list will be destroyed. While the list is in use by the researcher, it will be kept in a locked computer document with a password known only to the principal researcher.

VOLUNTARY PARTICIPATION

Your participation is voluntary. You may choose not to participate or you may discontinue your participation at any time without penalty or loss of benefits to which you are otherwise entitled. If you choose to withdraw without completing the protocol you are still entitled to receive the research credit. Your decision whether or not to participate will not affect your current or future relations with the University of North Dakota.

If you decide to leave the study before completing the materials, we ask that you inform the person and return the materials so they can be appropriately marked so as not to be included in the study.

CONTACT INFORMATION

The researcher conducting this study is Hannah Borhart, a graduate student in the psychology department of UND. Her faculty advisor is Dr. Douglas Peters. You may ask any questions you have now. If you later have questions, concerns, or complaints about the research please contact *Hannah Borhart* at (847) 702-0582 or Dr. Douglas Peters at (701-777-3648) during the day.

If you have questions regarding your rights as a research subject, or if you have any concerns or complaints about the research, you may contact the University of North Dakota Institutional Review Board at (701) 777-4279. Please call this number if you cannot reach research staff, or you wish to talk with someone else.

Your signature indicates that this research study has been explained to you, that your questions have been answered, and that you agree to take part in this study. You will receive a copy of this form.

I have read and understood the research project explained above. Anything that wasn't clear to me was explained so I could understand it. If I have any other questions later, I can have these answered too. I understand that I don't have to help with the project and can discontinue participation at any time throughout the study without penalty. I wish to take part in this study

Subjects Name: _____

Signature of Subject

Date

I consent to be contacted for participation in the second phase of this study. You may choose to fill in any amount of this information that you feel comfortable, but if you do not give at least an email address it will not be possible to contact you.

Name: _____

Phone number: _____

Email address: _____

Alternative Email Address: _____

Appendix B
Consent Form, Phase Two

INFORMED CONSENT (Phase 2)

TITLE: *The effects of masculine personality traits on reaction time tasks in adult males*

PROJECT DIRECTOR: *Hannah Borhart, Master's Student
University of North Dakota, (847) 702-0582*

THESIS CHAIRPERSON: *Dr. Douglas Peters, Ph.D.
University of North Dakota, (701) 777-3648*

STATEMENT OF RESEARCH

This is a research study involving adult males. A person who is to participate in the research must give his or her informed consent to such participation. This consent must be based on an understanding of the nature and risks of the research. This document provides information that is important for this understanding. Research projects include only subjects who choose to take part. Please take your time in making your decision as to whether to participate. If you have questions at any time, please ask.

WHAT IS THE PURPOSE OF THIS STUDY?

You are invited to be in a research study about masculine personality traits and reaction time because the screener questionnaire you took in your introductory psychology class/on SONA qualified you to take part in this portion of the research study.

The purpose of this research study is to examine how certain masculine personality traits affect reaction time among adult males.

HOW MANY PEOPLE WILL PARTICIPATE?

Approximately eighty males aged 18-40 will take part in phase two of this study at the University of North Dakota.

**ATTENTION:* If you have a history of myocardial infarction, cardiac arrhythmias or related cardiovascular disorder, including, but not limited to, use of a pace maker you are not permitted to participate in this study.

HOW LONG WILL I BE IN THIS STUDY?

This study will take part in two sessions. Participation in the screening questionnaires is over and you qualified for phase two of this study. Participation in the reaction time task is expected to last approximately sixty minutes.

PROCEDURES

If you agree to be in this study, the following will happen:

- Phase Two (the current phase):
 - You will be asked to complete several questionnaires.
 - *While taking these questionnaires, you are free to skip any questions that you would prefer not to answer for any reason.*
 - You will be asked to complete a computerized reaction time task against a competitor in an adjoining room involving electrical shocks.
 - During the competition if you lose you will receive a small electrical shock on your middle and index fingers given by your opponent, if you win you will give your opponent a small electrical shock.
 - After completion of this task you will complete another questionnaire.

- Lastly, you will receive research credit for your time. Completion of all the tasks at the time of the reaction-time task will take 45-60 minutes.

*You may withdraw from the study without penalty at any time by letting the research assistant know you no longer wish to participate.

RISKS OF THE STUDY

Some questions on the questionnaires may be of a sensitive nature and may make you feel uncomfortable as a result. However, such reactions are typically not viewed as being in excess of “minimal risk.”

If however, you become upset by questions or procedures you may stop participation at any time or choose not to answer a question. If you would like to talk to someone about your feelings about this study, you are encouraged to contact the following resources often for no charge or a nominal fee

- Psychological Services Center (701) 777-3691
- University Counseling Center (701) 777-2127
- UND Student Health Services (701) 777-4500
- Northeast Human Service Center (701) 795-3000

For those who are clients of the behavioral health clinics, please feel free to discuss this distress or concern with your counselor.

BENEFITS OF THIS STUDY

The benefits of this study include the increased knowledge of how masculine personality traits affects a person’s reaction time in males. This information may be helpful to professionals in the field and further similar research on these topics.

COST TO PARTICIPATE IN THE STUDY

You will not have any direct costs for being in this research study other than the time involved to complete the procedures.

PAYMENT FOR PARTICIPATING

You will receive 1 hour of research credit in your psychology course or for participation in phase one of this study and if you qualify and consent to being contacted, you will receive an additional hour of extra credit in your psychology course or \$10.00 cash for participation in the second phase of this study.

CONFIDENTIALITY

Information gathered from the questionnaires and procedures will be coded with an identification number and your name will not be associated with the data. Consent forms will be kept separately from the data. All materials gathered during this study will be kept securely in a locked file cabinet in a locked room of Corwin/Larimore Hall at UND.

Information will be kept for a period of three years, after which the information will be destroyed (shredding paper). The study experimenters (including graduate and undergraduate research assistants working with Hannah Borhart) and people who audit IRB procedures will have access to the data during this 3-year period. You will not be personally identified in any reports or publications that may result from this study.

VOLUNTARY PARTICIPATION

Your participation is voluntary. You may choose not to participate or you may discontinue your participation at any time without penalty or loss of benefits to which you are otherwise entitled. If you choose to withdraw without completing the protocol you are still entitled to receive the research credit. Your decision whether or not to

participate will not affect your current or future relations with the University of North Dakota.

If you decide to leave the study before completing the materials, we ask that you inform the person and return the materials so they can be appropriately marked so as not to be included in the study.

CONTACT INFORMATION

The researcher conducting this study is Hannah Borhart, a graduate student in the psychology department of UND. Her faculty advisor is Dr. Douglas Peters. You may ask any questions you have now. If you later have questions, concerns, or complaints about the research please contact *Hannah Borhart* at (847) 702-0582 or Dr. Douglas Peters at (701-777-3648) during the day.

If you have questions regarding your rights as a research subject, or if you have any concerns or complaints about the research, you may contact the University of North Dakota Institutional Review Board at (701) 777-4279. Please call this number if you cannot reach research staff, or you wish to talk with someone else.

If you have questions regarding your rights as a research subject, or if you have any concerns or complaints about the research, you may contact the University of North Dakota Institutional Review Board at (701) 777-4279. Please call this number if you cannot reach research staff, or you wish to talk with someone else.

Your signature indicates that this research study has been explained to you, that your questions have been answered, and that you agree to take part in this study. You will receive a copy of this form.

I have read and understood the research project explained above. Anything that wasn't clear to me was explained so I could understand it. If I have any other questions later, I can have these answered too. I understand that I don't have to help with the project and can discontinue participation at any time throughout the study without penalty. I wish to take part in this study.

Subjects Name: _____

Signature of Subject

Date

Appendix C
Hypermasculinity Questionnaire, ADMI-60

The following statements describe certain beliefs. Please read each item carefully and decide how well it describes you. Rate each item on the following 5-point scale:

A	B	C	D	E
<i>very much like me</i>	<i>like me</i>	<i>a little like me</i>	<i>not much like me</i>	<i>not at all like me</i>

1. If another man made a pass at my girlfriend/wife, I would tell him off.
2. I believe sometimes you've got to fight or people will walk all over you.
3. I think women should date one man.
4. I think men who show their emotions frequently are sissies.
5. I think men who show they are afraid are weak.
6. I think men who cry are weak.
7. I don't get mad, I get even
8. Even if I were afraid, I would never admit it.
9. I consider men superior to women in intellect.
10. I think women who say they are feminists are just trying to be like men.
11. I think women who are too independent need to be knocked down a peg or two.
12. I don't feel guilty for long when I cheat on my girlfriend/wife.
13. I know feminists want to be like men because men are better than women.
14. Women, generally, are not as smart as men.
15. My attitude regarding casual sex is "the more the better."

16. I would never forgive my wife if she were unfaithful.
17. There are two kinds of women: the kind I date and the kind I would marry.
18. I like to tell stories of my sexual experiences to my male friends.
19. I think it's okay for men to be a little rough during sex.
20. If a woman struggles while we are having sex, it makes me feel strong.
21. I am my own master; no one tells me what to do.
22. I try to avoid physical conflict.
23. If someone challenges me, I let him see my anger.
24. I wouldn't have sex with a woman who had been drinking.
25. Sometimes I have to threaten people to make them do what they should.
26. Many men are not as tough as me.
27. I value power over other people.
28. If a woman puts up a fight while we are having sex, it makes the sex more exciting.
29. I don't mind using verbal or physical threats to get what I want.
30. I think it is worse for a woman to be sexually unfaithful than for a man to be unfaithful.
31. I think it's okay for teenage boys to have sex.
32. I like to be in control of social situations.
33. I prefer to watch contact sports like football or boxing.
34. If I had a son I'd be sure to show him what a real man should do.
35. If a woman thinks she's better than me, I'll show her.
36. I notice women most for their physical characteristics like their breasts or body shape.
37. I think it's okay for men to date more than one woman.

38. I sometimes feel afraid.
39. I think men who stay home to take care of their children are just as weak as women.
40. I'd rather stay home and watch a movie than go out to a bar.
41. I like to brag about my sexual conquests to my friends.
42. When something bad happens to me I feel sad.
43. I can date many women at the same time without commitment.
44. I don't mind using physical violence to defend what I have.
45. I think men should be generally aggressive in their behavior.
46. I would initiate a fight if someone threatened me.
47. Women need men to help them make up their minds.
48. If some guy tries to make me look like a fool, I'll get him back.
49. I consider myself quite superior to most other men.
50. I get mad when something bad happens to me.
51. I want the woman I marry to be pure.
52. I like to be the boss.
53. I like to think about the men I've beaten in physical fights.
54. I would fight to defend myself if the other person threw the first punch.
55. If another man made a pass at my girlfriend/wife, I would want to beat him up.
56. Sometimes I have to threaten people to make them do what I want.
57. I think it's okay to have sex with a woman who is drunk.
58. If I exercise, I play a real sport like football or weight lifting.

59. I feel it is unfair for a woman to start something sexual but refuse to go through with it.

60. I often get mad.

Appendix D
Deception Aid, BEM Sex Role Inventory

The following items are from the Bem Sex-Role Inventory. Rate yourself on each item, on a scale from:

1 (never or almost never true) to 7 (always or almost always true)

1	2	3	4	5	6	7
Never or almost never true	Usually not true	Sometimes but infrequently true	Occasionally true	Often true	Usually true	Always or almost always true

- | | | |
|------------------------|---------------------------|------------------------|
| 1. self-reliant | 23. sympathetic | 42. solemn |
| 2. yielding | 24. jealous | 43. willing to take a |
| 3. helpful | 25. has leadership | stand |
| 4. defends own | abilities | 44. tender |
| beliefs | 26. sensitive to the | 45. friendly |
| 5. cheerful | needs of others | 46. gullible |
| 6. moody | 27. truthful | 47. inefficient |
| 7. independent | 28. willing to take risks | 48. acts as a leader |
| 8. shy | 29. understanding | 49. childlike |
| 9. conscientious | 30. secretive | 50. adaptable |
| 10. athletic | 31. makes decisions | 51. individualistic |
| 11. affectionate | easily | 52. does not use harsh |
| 12. theatrical | 32. compassionate | language |
| 13. assertive | 33. sincere | 53. unsystematic |
| 14. flatterable | 34. self-sufficient | 54. loves children |
| 15. happy | 35. eager to soothe hurt | 55. tactful |
| 16. strong personality | feelings | 56. ambitious |
| 17. loyal | 36. conceited | 57. gentle |
| 18. unpredictable | 37. dominant | 58. conventional |
| 19. forceful | 38. soft-spoken | |
| 20. feminine | 39. likable | |
| 21. reliable | 40. masculine | |
| 22. analytical | 41. warm | |

Appendix E
Masculine Gender Role Stress Questionnaire, MGRS

Read each of the following statements and imagine yourself in each situation. For each of the situations circle the number on the following scale that corresponds to how stressful you would anticipate the situation being for you.

0	1	2	3	4	5
Not At All	Slightly	Moderately	Significantly	Very	Extremely
Stressful	Stressful	Stressful	Stressful	Stressful	Stressful

For example, imagine that you lost your cell phone; if this wouldn't bother you at all you would circle 0 because you would feel not stress about the situation. If you were running around frantically looking for the phone because you couldn't live without it, you would circle 5 because you would be extremely stressed. If you would be a little worried and you would look for it but it wouldn't be the end of the world, you might circle 2, etc...

1. Not being able to find a sexual partner
2. Being with a woman who is much taller than you
3. Having your lover say that she/he is not satisfied
4. Comforting a male friend who is upset
5. Admitting to your friends that you do housework
6. Being perceived by someone as "gay"
7. Letting a woman take control of the situation

8. Being perceived as having feminine traits
9. Being compared unfavorably to other men
10. Working with people who seem more ambitious than you
11. Having others say that you are too emotional
12. Having to ask for directions when you are lost
13. Admitting that you are afraid of something
14. Appearing less athletic than a friend
15. Talking with a woman who is crying
16. Having a man put his arm around your shoulder
17. Being outperformed at work by a woman
18. Being unable to become sexually aroused when you want
19. Being married to someone who makes more money than you
20. Being with a woman who is more successful than you
21. Telling someone that you feel hurt by what he/she said
22. Being outperformed in a game by a woman
23. Having people say that you are indecisive
24. Needing your spouse to work to help support the family
25. Knowing you cannot hold your liquor as well as others
26. Getting fired from your job
27. Telling your spouse/girlfriend that you love her/him
28. Talking with a “feminist”
29. Having your children see you cry
30. Being unable to perform sexually

31. Working with people who are brighter than yourself
32. Having a female boss
33. Not making enough money
34. Finding you lack the occupational skills to succeed
35. Being unemployed
36. Being too tired for sex when your lover initiates it
37. Staying home during the day with a sick child
38. Getting passed over for a promotion
39. Losing in a sports competition
40. Feeling that you are not in good physical condition

Appendix F
Children of Alcoholics Screening Inventory, CAST

Please circle the answers below that best describe your feelings, behavior and experiences related to a parent's alcohol use. Take your time and be as accurate as possible and try to think back as far into your past as possible. Please circle the M if the statement is true about your mother, circle F if the statement is true about your father, circle N if the statement is true about neither and circle B if the statement is true about both.

1. Have you ever thought that one of your parents had a drinking problem?
2. Have you ever lost sleep because of a parent's drinking?
3. Did you ever encourage one of your parents to quit drinking?
4. Did you ever feel alone, scared, nervous, angry or frustrated because a parent was not able to stop drinking?
5. Did you ever argue or fight with a parent when he or she was drinking?
6. Did you ever threaten to run away from home because of a parent's drinking?
7. Has a parent ever yelled at or hit you or other family members when drinking?
8. Have you ever heard your parents fight when one of them was drunk?
9. Did you ever protect another family member from a parent who was drinking?
10. Did you ever feel like hiding or emptying a parent's bottle of liquor?
11. Do many of your thoughts revolve around a problem drinking parent or difficulties

that arise because of his or her drinking?

12. Did you ever wish that a parent would stop drinking?
13. Did you ever feel responsible for or guilty about a parent's drinking?
14. Did you ever fear that your parents would get divorced due to alcohol misuse?
15. Have you ever withdrawn from and avoided outside activities and friends because of embarrassment and shame over a parent's drinking problem?
16. Did you ever feel caught in the middle of an argument or fight between a problem drinking parent and your other parent?
17. Did you ever feel that you made a parent drink alcohol?
18. Have you ever felt that a problem-drinking parent did not really love you?
19. Did you ever resent a parent's drinking?
20. Have you ever worried about a parent's health because of his or her alcohol use?
21. Have you ever been blamed for a parent's drinking?
22. Did you ever think either parent was an alcoholic?
23. Did you ever wish your home could be more like the homes of your friends who did not have a parent with a drinking problem?
24. Did a parent ever make promises to you that he or she did not keep because of drinking?
25. Did you ever wish that you could talk to someone who could understand and help the alcohol-related problems in your family?
26. Did you ever fight with your brothers and sisters about a parent's drinking?
27. Did you ever stay away from home to avoid the drinking parent or your other parent's reaction to the drinking?

28. Have you ever felt sick, cried, or had a “knot” in your stomach after worrying about a parent’s drinking?

29. Did you ever take over any chores and duties at home that were usually done by a parent before he or she developed a drinking problem?

Appendix G
Rosenberg Self-Esteem Questionnaire, RSES

Below is a list of statements dealing with your general feelings about yourself. If you Strongly Agree, circle SA. If you agree with the statement, circle A. If you disagree, circle D. If you strongly disagree, circle SD.

1. I feel that I am a person of worth, at least on an equal plane with others
2. I feel that I have a number of good qualities
3. All in all, I am inclined to feel that I am a failure
4. I am able to do things as well as most other people
5. I feel I do not have much to be proud of
6. I take a positive attitude toward myself
7. On the whole, I am satisfied with myself
8. I wish I could have more respect for myself
9. I certainly feel useless at times
10. At times I think I am no good at all

Appendix H Interpersonal Support Questionnaire

This scale is made up of a list of statements each of which may or may not be true about you. For each statement check “definitely true” if you are sure it is true about you and “probably true” if you think it is true but are not absolutely certain. Similarly, you should check “definitely false” if you are sure the statement is false and “probably false” if you think it is false but are not absolutely certain.

1. There are several people that I trust to help solve my problems.
2. There is someone who takes pride in my accomplishments.
3. When I feel lonely, there are several people I can talk to.
4. There is no one that I feel comfortable to talking about intimate personal problems.
5. I feel like I’m not always included by my circle of friends.
6. I don’t often get invited to do things with others.

Appendix I
Executive Functioning Index, EFI

Listed below are questions for this section of the survey. Please provide a response for every question. If you are given the option to decline to answer a question, then declining to answer is considered a response.

Rate how well each of the following statements describe you on the following scale:

- 1 - Not At All
- 2
- 3 - Somewhat
- 4
- 5 - Very Much

1. I have a lot of enthusiasm to do things
2. When doing several things in a row, I mix up the sequence
3. I try to plan for the future
4. I can sit and do nothing for hours
5. I take risks, sometimes for fun
6. I have trouble doing two things at once, multi-tasking
7. I'm interested in doing new things
8. I have a lot of concern for the well-being of other people
9. I'm an organized person
10. I save money on a regular basis
11. I do or say things that others find embarrassing
12. People who are foolish enough to be taken advantage of deserve it

13. I only have to make a mistake once in order to learn from it
14. I tend to be an energetic person
15. I make inappropriate sexual advances or flirtatious comments
16. When someone is in trouble, I feel the need to help them
17. I sometimes lose track of what I am doing
18. I feel protective towards a friend who is being treated badly
19. I think about the consequences of an action before I do it
20. I lose my temper when I get upset
21. I take other people's feelings into account when I do something
22. I have trouble summing up information in order to make a decision with it.
23. I start things, but then lose interest and do something else
24. I swear/use obscenities
25. I don't like it if my actions or words hurt someone else
26. I use strategies to remember things
27. I monitor myself so that I can catch any mistakes

Appendix J
Narcissism Personality Inventory, NPI

Listed below are questions for this section of the survey. Please provide a response for every question. If you are given the option to decline to answer a question, then declining to answer is considered a response.

This survey consists of 40 True/False questions. Please answer true or false depending on how the statement pertains to you.

1. I would prefer to be a leader
2. I see myself as a good leader
3. I will be a success
4. People always seem to recognize my authority
5. I have a natural talent for influencing people
6. I am assertive
7. I like to have authority over people
8. I am a born leader
9. I rarely depend on anyone else to get things done
10. I like to take responsibility for making decisions
11. I am more capable than other people
12. I can live my life in any way I want to
13. I always know what I am doing

14. I am going to be a great person
15. I am an extraordinary person
16. I know that I am good because everybody keeps telling me so
17. I like to be complimented
18. I think I am a special person
19. I wish somebody would someday write my biography
20. I am apt to show off if I get the chance
21. Modesty doesn't become me
22. I get upset when people don't notice how I look when I go out in public
23. I like to be the center of attention
24. I would do almost anything on a dare
25. I really like to be the center of attention
26. I like to start new fads and fashions
27. I can read people like a book
28. I can make anybody believe anything I want them to
29. I find it easy to manipulate people
30. I can usually talk my way out of anything
31. Everybody likes to hear my stories
32. I like to look at my body
33. I like to look at myself in the mirror
34. I like to display my body
35. I will never be satisfied until I get all that I deserve
36. I expect a great deal from other people

37. I want to amount to something in the eyes of the world

38. I have a strong will to power

39. I insist upon getting the respect that is due me

40. If I ruled the world it would be a much better place

Appendix K
Demographic Questionnaire

Age: _____

Gender: _____ Male _____ Female

Marital Status: _____ Single _____ Divorced _____ Married

What is your race? _____ Caucasian
_____ Native American – if so, name of tribal affiliation _____
_____ Hispanic/Latino
_____ African American
_____ Asian/Pacific Islander
_____ Other – If so, please explain _____

What is the highest grade (or year) of school you have completed? (Check One.)

Elementary School	High School	College	Graduate School
01 _____	09 _____	13 _____	17 _____
02 _____	10 _____	14 _____	18 _____
03 _____	11 _____	15 _____	19 _____
04 _____	12 _____	16 _____	20+ _____
05 _____			
06 _____			
07 _____			

Appendix L
Violent Experiences Questionnaire-Revised, VEQ-R

Please use the letters A through I to indicate the extent to which you experienced or observed each of the following between the ages of 5 and 16. Blank spaces will be scored as “A” (never happened). Add clarifying comments on the back if you like.

<i>Frequency Index of Incident</i> A) never happened B) happened only once C) happened only twice D) happened less than five times E) happened about once a year F) happened about twice a year G) happened about once a month H) happened about once a week I) happened more than once a week	ACTS TOWARD YOU BY A PARENT or STEP-PARENT during each of these age ranges			ACTS TOWARD YOU BY A SIBLING or STEP-SIBLING during each of these age ranges			ACTS OBSERVED BETWEEN <i>BETWEEN</i> PARENTS or STEP-PARENTS during each of these age ranges		
	5-8	9-12	13-16	5-8	9-12	13-16	5-8	9-12	13-16
TARGET ACT									
<i>Parental Discipline:</i> spanking or other forms of reasonable physical discipline producing mild to moderate pain <i>without physical injury</i>				no ratings in this box			no ratings in this box		
<i>Verbal Conflict:</i> yelling, cursing, damaging property, and other expressions of anger <i>without any physical injury</i>									
<i>Threats of Physical Violence:</i> statements or gestures expressing a threat to inflict physical injury									
<i>Physical Acts with or without Physical Injury:</i> pushing, shoving, shaking, striking, punching, kicking, beating, burning, or use of a weapon to inflict pain or injury									
<i>Consequences of Any Described Act:</i> police or other authorities summoned, arrest of a family member, medical services needed, death of a family member, public embarrassment, etc.									

ACTS BY BULLIES

	5-8	9-12	13-16
<i>Peer Bullying Experiences:</i> <i>How often were you physically taunted or bullied by peers during or after school?</i>			
<i>How often were you called names or verbally teased by peers during or after school?</i>			

Appendix M
Post-Experiment Questionnaire

We are very interested in your perceptions about your performance and opponent during the competition that you just completed. Please offer predictions about your performance and some qualities of your opponent.

1. Briefly describe how you believe you performed on the reaction time task.
-

2. Briefly describe the difficulty of the reaction time task.
-

3. What do you think was the age of your opponent?

4. How would you describe the competitiveness and/or aggressiveness of your opponent?
-

5. How would you rate the fairness of your opponent?
-

6. Briefly describe the personality of your opponent and give some impressions of him/her.
-

7. Do you think that you might know the identity of your opponent (if so, give us your prediction)?
-

Please note any other thoughts about your performance or opponent you may have.

Thank you for your participation!

Appendix N Debriefing Form

Thank you for your participation in this research study. The purpose of the study is to examine the effects of hypermasculinity on laboratory aggression among males. You were informed that during this experiment, you were competing against another participant in a different room during the reaction time task. In actuality, this was a task measuring aggression and you were not competing against another person; therefore, you were not delivering shocks to anyone. The computer was configured to have you win and lose a set amount of trials.

We realize that due to the sensitive nature of the questions on the questionnaires and procedure, it is possible that you became uncomfortable. If your participation in this study caused any significant anxiety or distress, we would like to provide you with the following resources, and strongly encourage you to discuss these concerns with a clinician. The following resources are available to you either free or at a nominal cost:

- **Psychological Services Center (701) 777-3691**
- **University Counseling Center (701) 777-2127**
- **UND Student Health Services (701) 777-4500**
- **Northeast Human Service Center (701) 795-3000**

Because this research project is continuing, we respectfully ask that you not discuss the specifics of the study with friends or acquaintances, as doing so would seriously jeopardize the results of the study. Please respect this request.

Again, thank you for your participation in this study. We wish you well with the remainder of your studies this semester.

Appendix O
Deception Aid for Masculine Male and Female Opponents

Gender: _____ Male _____ Female
 Sexual Orientation: X Heterosexual _____ Homosexual _____ Bisexual
 _____ Other

The following items are from the Bem Sex-Role Inventory. Rate yourself on each item, on a scale from:

1 (never or almost never true) to 7 (always or almost always true)

1	2	3	4	5	6	7
Never or almost never true	Usually not true	Sometimes but infrequently true	Occasionally true	Often true	Usually true	Always or almost always true

1.	Self-reliant	1	2	3	4	5	6	7
2.	Yielding	1	2	3	4	5	6	7
3.	Helpful	1	2	3	4	5	6	7
4.	Defends own beliefs	1	2	3	4	5	6	7
5.	Cheerful	1	2	3	4	5	6	7
6.	Moody	1	2	3	4	5	6	7
7.	Independent	1	2	3	4	5	6	7
8.	Shy	1	2	3	4	5	6	7

9. Conscientious	1	2	3	4	5	6	7
10. Athletic	1	2	3	4	5	6	7
11. Affectionate	1	2	3	4	5	6	7
12. Theatrical	1	2	3	4	5	6	7
13. Assertive	1	2	3	4	5	6	7
14. Flatterable	1	2	3	4	5	6	7
15. Happy	1	2	3	4	5	6	7
16. Strong personality	1	2	3	4	5	6	7
17. Loyal	1	2	3	4	5	6	7
18. Unpredictable	1	2	3	4	5	6	7
19. Forceful	1	2	3	4	5	6	7
20. Feminine	1	2	3	4	5	6	7
21. Reliable	1	2	3	4	5	6	7
22. Analytical	1	2	3	4	5	6	7
23. Sympathetic	1	2	3	4	5	6	7
24. Jealous	1	2	3	4	5	6	7
25. Has leadership abilities	1	2	3	4	5	6	7
26. Sensitive to the needs of others	1	2	3	4	5	6	7
27. Truthful	1	2	3	4	5	6	7
28. Willing to take risks	1	2	3	4	5	6	7
29. Understanding	1	2	3	4	5	6	7
30. Secretive	1	2	3	4	5	6	7

31. Makes decisions easily
1 2 3 4 5 6 7
32. Compassionate
1 2 3 4 5 6 7
33. Sincere
1 2 3 4 5 6 7
34. Self-sufficient
1 2 3 4 5 6 7
35. Eager to soothe hurt feelings
1 2 3 4 5 6 7
36. Conceited
1 2 3 4 5 6 7
37. Dominant
1 2 3 4 5 6 7
38. Soft-spoken
1 2 3 4 5 6 7
39. Likable
1 2 3 4 5 6 7
40. Masculine
1 2 3 4 5 6 7
41. Warm
1 2 3 4 5 6 7
42. Solemn
1 2 3 4 5 6 7
43. Willing to take a stand
1 2 3 4 5 6 7
44. Tender
1 2 3 4 5 6 7
45. Friendly
1 2 3 4 5 6 7
46. Gullible
1 2 3 4 5 6 7
47. Inefficient
1 2 3 4 5 6 7
48. Acts as a leader
1 2 3 4 5 6 7
49. Childlike
1 2 3 4 5 6 7
50. Adaptable
1 2 3 4 5 6 7
51. Individualistic
1 2 3 4 5 6 7
52. Does not use harsh language
1 2 3 4 5 6 7

53. Unsystematic
1 2 3 4 5 6 7
54. Loves children
1 2 3 4 5 6 7
55. Tactful
1 2 3 4 5 6 7
56. Ambitious
1 2 3 4 5 6 7
57. Gentle
1 2 3 4 5 6 7
58. Conventional
1 2 3 4 5 6 7

What are your career goals?

At this point I'd like to do corporate law; ultimately I'd like to be a partner in a large firm.

How important is it for you to be monogamous in relationships?

While I think two people in a committed relationship should be monogamous, I don't really see the point of committed relationships. I think people should just have fun, especially in college

How long does it usually take you to get ready in the morning? How important is it to you to always look your best?

I usually only take a few minutes to get ready in the morning, I like to look good but I don't see the point of spending a lot of time to sit in class all day

If your best friend were asked to describe you in three words, what would he/she say?

Stubborn, Pushy, Nontraditional

SEX ROLE RATING:

	Masculinity 5.4		
Femininity 2.25		High	Low
	High	Androgynous	Feminine
	Low	Masculine	Undifferentiated

Appendix P
Deception Aid for Feminine Male and Female Opponents

Gender: _____ Male _____ Female
 Sexual Orientation: ___X___ Heterosexual _____ Homosexual _____ Bisexual
 _____ Other

The following items are from the Bem Sex-Role Inventory. Rate yourself on each item, on a scale from:

1(never or almost never true) to 7(always or almost always true)

1	2	3	4	5	6	7
Never or almost never true	Usually not true	Sometimes but infrequently true	Occasionally true	Often true	Usually true	Always or almost always true

1. Self-reliant	1	2	3	4	5	6	7
2. Yielding	1	2	3	4	5	6	7
3. Helpful	1	2	3	4	5	6	7
4. Defends own beliefs	1	2	3	4	5	6	7
5. Cheerful	1	2	3	4	5	6	7
6. Moody	1	2	3	4	5	6	7
7. Independent	1	2	3	4	5	6	7
8. Shy	1	2	3	4	5	6	7

9. Conscientious	1	2	3	4	5	6	7
10. Athletic	1	2	3	4	5	6	7
11. Affectionate	1	2	3	4	5	6	7
12. Theatrical	1	2	3	4	5	6	7
13. Assertive	1	2	3	4	5	6	7
14. Flatterable	1	2	3	4	5	6	7
15. Happy	1	2	3	4	5	6	7
16. Strong personality	1	2	3	4	5	6	7
17. Loyal	1	2	3	4	5	6	7
18. Unpredictable	1	2	3	4	5	6	7
19. Forceful	1	2	3	4	5	6	7
20. Feminine	1	2	3	4	5	6	7
21. Reliable	1	2	3	4	5	6	7
22. Analytical	1	2	3	4	5	6	7
23. Sympathetic	1	2	3	4	5	6	7
24. Jealous	1	2	3	4	5	6	7
25. Has leadership abilities	1	2	3	4	5	6	7
26. Sensitive to the needs of others	1	2	3	4	5	6	7
27. Truthful	1	2	3	4	5	6	7
28. Willing to take risks	1	2	3	4	5	6	7
29. Understanding	1	2	3	4	5	6	7
30. Secretive	1	2	3	4	5	6	7

31. Makes decisions easily
1 2 3 4 5 6 7
32. Compassionate
1 2 3 4 5 6 7
33. Sincere
1 2 3 4 5 6 7
34. Self-sufficient
1 2 3 4 5 6 7
35. Eager to soothe hurt feelings
1 2 3 4 5 6 7
36. Conceited
1 2 3 4 5 6 7
37. Dominant
1 2 3 4 5 6 7
38. Soft-spoken
1 2 3 4 5 6 7
39. Likable
1 2 3 4 5 6 7
40. Masculine
1 2 3 4 5 6 7
41. Warm
1 2 3 4 5 6 7
42. Solemn
1 2 3 4 5 6 7
43. Willing to take a stand
1 2 3 4 5 6 7
44. Tender
1 2 3 4 5 6 7
45. Friendly
1 2 3 4 5 6 7
46. Gullible
1 2 3 4 5 6 7
47. Inefficient
1 2 3 4 5 6 7
48. Acts as a leader
1 2 3 4 5 6 7
49. Childlike
1 2 3 4 5 6 7
50. Adaptable
1 2 3 4 5 6 7
51. Individualistic
1 2 3 4 5 6 7
52. Does not use harsh language
1 2 3 4 5 6 7

53. Unsystematic	1	2	3	4	5	6	7
54. Loves children	1	2	3	4	5	6	7
55. Tactful	1	2	3	4	5	6	7
56. Ambitious	1	2	3	4	5	6	7
57. Gentle	1	2	3	4	5	6	7
58. Conventional	1	2	3	4	5	6	7

What are your career goals?

I really like working with people and making them feel better. I am at this UND to get my Nursing degree. I hope to be an R.N. after I graduate.

How important is it for you to be monogamous in relationships?

I value monogamy very much. I think if two people (women or men) agree to be in a Relationship, they should remain faithful to each other.

How long does it usually take you to get ready in the morning? How important is it to you to always look your best?

I always get up at least two hours before I have to be anywhere so that I can take a shower and carefully pick out my outfit for the day. I like to always look my best.

If your best friend were asked to describe you in three words, what would he/she say?

Gentle, Understanding, Kind

SEX ROLE RATING:

	Masculinity 2.2		
Femininity 5.75		High	Low
	High	Androgynous	Feminine
	Low	Masculine	Undifferentiated

Appendix Q
Research Assistant Instructions and Script

Before the participant arrives:

1. Check the schedule to see the participants experimental group (high versus low hypermasculinity, male versus woman competitor and gender role of the competitor)
2. On the computer, open the folder marked “TAP” and hit the icon that looks like a brain to open it.
3. Under Experiment -> click open experiment -> click folder named Borhart and click the file named Borhart.tap then click open.

Instructions in **bold** are your actions.

Instructions in *italics* are what you will say to the participant.

****** If after you check the schedule and the competitor is a woman, say “she” and if the competitor is a man, say “he.”

Pick up the participant from the designated location. *Hello, my name is _____ and I will be running the experiment today. Please follow me. We have to go up this staircase over here so that you do not see your opponent in the competition portion of the experiment. He/She is already in their room filling out the questionnaires that you will be filling out as well if you consent to participate after reading the consent form. Take*

the participant up the stairs and into room 412. Tell the participant to please have a seat at the table.

Welcome! I am going to go over the consent form, which will fully inform you about your participation. Fully explain consent form, especially mentioning that they cannot participate if they have any heart problems or a pacemaker, that participation is voluntary, their participation is confidential, they will be competing against an opponent in a reaction time task where they will be giving and receiving electrical shocks and that some of the questions on the questionnaires may be of a sensitive nature or make them uncomfortable, let them know that they may choose to not answer any question and that they can withdraw from the study at anytime without penalty.

*This study is examining the effects of certain personality traits on reaction time. Before we get started I would like you to complete a couple short questionnaires (**Demographic questionnaire and VEQ**) and turn them into me. Again, some of the questions might be sensitive in nature and make you uncomfortable. You may choose to not answer any question that you wish. It is important that you understand you can choose to discontinue your participation in this study at any time. (**Explain how to fill out the VEQ**) Do you have any questions? Okay great, I will be right back if you have any questions over the questionnaires, I am going to go check to see if your opponent is doing all right on their questionnaires. **Leave the room once the participant begins filling out their questionnaires to check if the other participant has any questions on their questionnaires. When you come back (after 2-3 minutes) sit quietly away from the***

participant as he can fill his questionnaires out in private. When he is finished, collect his packet.

Thank you. When you completed the questionnaires online, you and your opponent filled out a questionnaire that will be used to get to know each other a little before the competition. Your opponent will not know your name or who you are; all they will know is what you put on this questionnaire. You will be receiving the same questionnaire filled out by your opponent. Show them their BEM sex role inventory (It should be in the lockbox with a sticky note with their name on it; remove the sticky note prior to giving them the questionnaire). I want you to look over this so that you can see that it is the questionnaire that you filled out. I will now be taking this to the other room to show your opponent and I will return with his/her questionnaire. Take participant's BEM to the other room. Pick up that opponent's questionnaire that matches the experimental condition and return with it. Give the participant 3-5 minutes to read over their opponent's information.

When the participant is finished reading the PAQ, have the participant sit in front of the computer. Put the electrodes on the pointer and middle finger of his non-dominant hand. Before beginning the competition, we are going to establish your tolerance. Under Threshold click -> set subject threshold. Please let me know when you first start to notice the stimulation in your fingers from the electrodes. Click Start on Lower threshold. When the participant indicates that he can feel stimulation click Stop. Now, I want you to let me know when the stimulation reaches and

uncomfortable intensity. Click Start on Upper threshold. When the participant indicates that the stimulation is uncomfortable click Stop.

I am going to go check to see if he/she is ready in the other room before we start the competition. After going to the other room to check on the other participant, return (after 1-2 minutes) and say, “Okay he/she is ready. We can begin the competition.”

Under Experiment click start experiment -> official. Read the following aloud as the participant reads it on the screen. You will follow the commands on the screen.

You will be instructed to press and hold the space bar and then you will see “release the spacebar” on the screen. When you see this, release the space bar as fast as you can.

The computer will inform you of whether you won or lost. If you win the trial you will choose the intensity of shock to be delivered to your opponent by choosing a number button on the keyboard. If you lose you will receive a shock of an intensity that your opponent chose for you. The shock intensities range from 1 to 10, one being the lowest intensity and 10 being the highest intensity. Any Questions? Good Luck.

When the participant is finished with the reaction-time task, have him sit back at the table and fill out the post-task questionnaire.

Debrief and compensate the participant.

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