EFFECTS OF MASCULINE IDENTITY AND GENDER ROLE STRESS ON AGGRESSION IN MEN

by

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(Under the Direction of Amos Zeichner, Ph.D.)

ABSTRACT

Predominant theories posit that the association between masculine identity and aggression is moderated by the degree to which a man experiences cognitive stress when adhering to masculine norms; referred to as gender role stress. This study sought to examine whether masculine identity predicts aggressive behavior (under laboratory conditions) and whether this relationship is moderated by gender role stress. Seventy-five undergraduate males participated in a competitive reaction-time task whereby they were given the choice to shock or refrain from shocking an 'ostensible' opponent. Analyses revealed a significant moderating effect of gender role stress on the relationship between identity and aggression as well as significant main effects for identity and gender role stress. Findings are discussed as having implications for understanding the influence of intra-individual factors in the initiation and maintenance of aggressive behavior as well as the contribution of gender role socialization to understanding aggression.

INDEX WORDS: Masculine identity, Gender role stress, Aggression, Violence

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TABLE OF CONTENTS

LIST OF TABLES

Page

LIST OF FIGURES

Page

CHAPTER 1

INTRODUCTION

Scholarly debate on the topic of human aggression has juxtaposed the differences between dispositional and socio-cultural factors in predicting this deleterious behavior. Recently, however, research has begun to examine how aggression arises from the interaction of dispositional characteristics, such as gender identity, and pressure to adhere to social norms. Specifically, social psychological literature and clinical research have evinced that characteristics associated with a masculine sense of self (i.e., masculine identity), such as authoritarianism and the need for social power, may activate the desire to appear dominant and therefore increase a man's propensity toward enacting harmful, and even violent behavior (Kilianski, 2003). Rigid adherence to the male role, more commonly referred to as gender role stress, has also been linked to increased levels of direct aggression, emotional lability, low esteem, negative attitudes towards women, and sexual prejudice (Moore & Stuart, 2004). Although much effort has been directed at identifying correlates and predictors of externalizing and violent behavior, (Archer, 2004; Holtzworth-Munroe, Meehan, Herron, Rehman, & Stuart, 2004), increasing attention has focused on examining the association between components of masculine identity and gender role stress.

Pertinent literature indicates that masculine ideology is strongly linked to reports of psychological distress, aggression, violent behavior, and conduct problems in men (Addis & Mahalik, 2003; Franchina, Eisler, & Moore, 2001; Jakupcak, Lisak & Roemer, 2002; Lopez & Emmer, 2002; Monk & Ricciardelli, 2003). For example, perpetrators of violent behavior endorse strong “masculine” attitudes, such as the need to be powerful, dominant, and respected

and, likewise, support the use of aggression to gain a status role. Moreover, personality traits indicative of "hyper-masculinity" (i.e., overt and strong endorsement of masculine identity) have been linked to significantly higher levels of aggression, sexual prejudice, and the use of force against women compared to men who do not endorse these personality traits (Mosher & Sirkin, 1984; Parrott, Adams & Zeichner, 2002; Parrott & Zeichner, 2003). Additionally, male ideology has demonstrated inverse associations to psychological well-being and self-esteem (Addis & Mahalik, 2003; Kopper & Epperson, 1996; Pleck, 1995; Stillson, O'Neil, & Owen, 1991), and strong positive associations to anxiety, depression, substance use, and other externalizing behavior (Kilianski, 2003; Mahalik & Cournoyer, 2000; McCreary, Newcomb, & Sadava, 1999).

Strict adherence to the masculine identity, referred to as gender role stress, can also incur negative behavioral consequences such as anger and violence, as well as depression and low self-esteem (Blazina, Pisecco, & O'Neil, 2005; Good, Robertson, & O'Neil, 1995; Hayes & Mahalik, 2000; Jakupcak, Lisak, & Roemer, 2002). Researchers have theorized that the manner by which men are socialized results in feeling a strong pressure to uphold gender role norms and expectations. And, accordingly, aggression perpetrated by a man may be the by-product of his desire to enforce traditional gender norms, maintain appropriate social dynamics, exert power over others, and seek adventure (Kilianski, 2003). Poor psychological functioning and destructive conflict resolution tactics have been posited as a man's response to adhering to prescribed gender role norms (Blazina & Watkins, 2000), and, likewise, aggressive behavior may represent a coping strategy for negative affective experiences that arise from internal value conflicts with the masculine ideal (Moore & Stuart, 2004). Thus, masculine gender role stress may exist on a continuum, where moderate conformity to traditional gender roles engenders

positive psychological functioning and over-conformity may lead to emotional strain and ensuing violent behavior (Eisler & Skidmore, 1987; Mahalik et al., 2003).

Although extant research shows a strong positive association between identity and aggression and gender role strain and aggression using questionnaires or vignettes, no study to date has examined these relationships in a laboratory setting. Pertinent literature indicates that aggression perpetrated by a man may arise from the interaction of masculine identity and gender role stress. Additionally, it has been posited that this effect may be due, in large part, to men's negative emotional experiences during a confrontation. As such, the current study adds to these findings and posits three main objectives: 1) to examine whether a strong endorsement of masculine identity and gender role stress, alone and together, can predict high aggressive responding; 2) to examine the multiplicative effect of masculine identity and gender role stress on aggression; and 3) to examine whether the effects of masculine identity and gender role stress on aggression can be explained by men's experiences of negative affect during a confrontational task.

Masculine Identity

On a biological level, it has been posited that males are predetermined to behave aggressively, particularly with regards to protecting goods or property and maintaining the safety of their offspring (Campbell, 1999). Indeed, organic explanations of male aggressive behavior have been consistently demonstrated in laboratory-based animal studies (Carlson, 2004), but may only explain a small component of the variance in aggressive behavior. We turn to socio-psychological explanations to provide a more comprehensive understanding of the factors that lead to the identity-aggression link in men.

Current research has sought to identify the underlying psychosocial dimensions of masculine identity to better understand those factors that predict aggression. The New Oxford English Dictionary defines "masculine" as "having qualities or appearance traditionally associated with men." Past definitions have suggested narrow and categorical meanings of masculinity and gender identity, and, as such, these definitions were often limited to behavioral patterns (i.e., sexual preference) or one's physical appearance (Freund, Nagler, Lagevin, Zajac, & Steiner, 1974; McConaghy & Armstrong, 1983; Money & Hampson, 1955). According to these tenets, a man was considered masculine if he behaved like a man, engaged in sexual relations with females, and dressed in a masculine way. As noted, these conceptualizations did not account for dispositional, cognitive, or socio-cultural factors that explain individual differences in identity.

Recent definitions of masculinity encompass a more comprehensive, albeit, not exhaustive, conceptualization of gender identity. These consider the effects of both socialization processes as well as intra-individual factors in the development of the male identity (Mahalik et al., 2003; Walker, Tolkar, & Fisher, 2000). Thus, current theories describe masculine identity as a conglomeration of individual attitudes, gender role socialization, and salient cultural belief systems. Pleck, Sonenstein, & Ku (1993) refer to masculine identity as the "endorsement and internalization of cultural belief systems about masculinity and male gender, rooted in the structural relationship between the two sexes" (p.88). Thus, adherence to gender role norms may predispose some men to engage in behaviors that are viewed as consistent with "appropriate" male behavior, such as being dominant, competitive, and physically strong.

Brannon and Juni (1984), two influential theorists of masculine identity, hypothesized a broad conceptual model of masculine identity, which they referred to as "the blueprint for

manhood." Their sketch of masculinity considered socialization processes as well as dispositional characteristics and was comprised of four factor-analytically derived components: *No Sissy Stuff*, the *Big Wheel*, the *Sturdy Oak*, and *Give'm Hell*. Specifically, Brannon and Juni posited that men are socialized to avoid appearing feminine (*No Sissy Stuff*), to gain status and respect (*Big Wheel*), to appear invulnerable (*Sturdy Oak*), and to seek violence and adventure (*Give'm Hell*). As compared to previous conceptualizations, the authors posited a distinct and comprehensive model for understanding the masculine identity and their scale (See Brannon Masculinity Scale, Brannon & Juni, 1984) has demonstrated strong empirical support in validating as well as discriminating among the cognitive and behavioral factors that are associated with male ideology (Hill & Fischer, 2001; Stillson, O'Neil, & Owen, 1991; Walker, Tolkar, & Fisher, 2000).

Other conceptualizations have divided masculine identity into four separate components, similar to those postulated by Brannon and Juni (1984). Walker, Tokar, and Fisher (2000) examined the underlying factor structure of the male ideology using a large compendium of masculinity measures. The four factor-analytic dimensions that resulted were *Masculine Ideology*, *Liberal Gender Attitudes*, *Masculine Gender Role Stress*, and *Comfort with Emotionality and Affectionate Behavior Toward Men*. The *Masculine Ideology* factor, which explained 35% of the variance in identity was composed of all the Brannon Masculinity Scale subscales, anti-feminine sentiments, patriarchal ideology (See The Macho Scale, Villemez & Touhey, 1977), and negative attitudes towards gay men. This higher-order factor was conceptualized as the need to achieve power, the need to show one's masculine potential, sexually prejudice attitudes, and acceptance of dominance over women. Factor Two, *Liberal Gender Attitudes*, accounted for nearly 16% of the variance in masculinity, and was composed of

men's nontraditional, egalitarian gender-role attitudes. The *Masculine Gender Role Stress* factor, which accounted for 9% of the variance, described men's fears of physical inadequacy, emotional inexpressiveness, subordination to women, intellectual inferiority, and failure to perform adequately. The final factor accounted for 7% of the variance in masculinity, and was related to men's comfort with emotions and expressions of affection between men. This four-factor model provides further evidence that masculine identity is largely a function of sexually prejudice attitudes, conflicts with gender role expectations, and a socially sanctioned desire to appear dominant, competitive, and wield power over others.

Ryan (2004) proposed that cognitions comprised of attitudes and beliefs about aggression, men's scripts about violence, and beliefs about appropriate masculinity (particularly hypermasculinity) exert a crucial role in men's desire to behave aggressively. Hypermasculinity, as she discussed, is composed of callous sexual beliefs, the belief that violence is manly, and the view that danger and competition are exciting. Thus, aggression perpetrated by a man, particularly sexual aggression, arises from a belief system that endorses the use of violence as a means to gain power. Additionally, the view that aggressive acts are dangerous, coupled with the orientation that men seek adventure, may only facilitate a man's propensity towards violent behavior.

Several studies have examined the association of masculinity with aggression and have provided mixed evidence for the role of identity in the perpetration of violent behavior. In an examination of the construct validity of the Conformity to Masculine Norms Inventory, Mahalik et al. (2003) found that masculine ideology was moderately correlated with hostility (r = .34) and strongly correlated with social dominance (r = .48) and general aggression (r = .55). Using a behavioral measure of aggression, Parrott and Zeichner (2003) found that men high in

hypermasculinity evinced greater levels of aggression as measured by electric shocks delivered to another man, compared to low hypermasculine participants. Conversely, Jakupcak, Lisak, and Roemer (2002) found no association between masculine identity and self-reported aggression and Fitzpatrick et al. (2004) evinced similar findings. In light of these findings, further examination of the predictive and concurrent validity of masculine identity on aggressive behavior is warranted.

In sum, previous research shows that the masculine gender identity is commonly comprised of four dimensions, relating to competitiveness and dominance, emotional non-expressiveness, gender role stress, and anti-gay and anti-feminine attitudes. Moreover, as has been demonstrated in several studies, dimensions of the male personality may potentiate the perpetration of physical violence.

Gender Role Stress and Affective Responses

Recent studies have shown that the association between male identity and aggressive behavior may be due, in part, to the construct of gender role stress. According to Stillson, O'Neil, and Owen (1991), gender role stress arises "when the socialized male gender role results in a personal restriction, devaluation, or violation of others or self," (p. 458) particularly in conflict-laden or provocative situations. Jakupcak, Lisak, and Roemer (2002) examined the effects of masculine ideology and gender role stress on the perpetration of interpersonal conflict and found that gender role stress accounted for a significant portion of the variance in aggression and violence above the effects of masculine ideology. Additionally, results from their hierarchical regression analysis demonstrated a moderating effect of gender role stress on the relation between masculine ideology and aggression, indicating that the addition of the gender role strain significantly improved the model.

It has also been proposed that, while not exclusively caused by a feeling of threat, masculine gender role stress arises as a consequence of the strain caused by restrictive behavioral and affective components of the male gender role. In his *Gender Role Strain Paradigm,* Pleck (1995) posited that "gender socialization, adherence to traditional norms, and the strain experienced by discrepancies between masculine norms and a man's behaviors might create negative consequences in the lives of men" (as cited in Jakupcak, Lisak & Roemer, 2002, p. 97). Accordingly, gender role stress is an experiential component that arises from a man's "unsuccessful" attempts at conforming to societal gender role standards during times of threat.

Eisler at al. (2000) and Franchina, Eisler, and Moore (2001) investigated changes in men's attributions and affective responses to vignettes of dating situations that depicted masculine-threatening situations with a female dating partner. Men were divided into groups based on high and low levels of gender role stress and were instructed to listen to audio-taped vignettes that depicted masculine relevant or masculine irrelevant situations where female partners served to threaten the man's sense of masculinity in the relationship. Results indicated that men who heard masculine relevant situations with female-threatening partner behavior reported significantly greater negative attributions, negative affective responses, and endorsement of verbal aggression than men in masculine irrelevant situations. Moreover, there was an interaction of the level of gender role stress with threatening situations such that men with high gender role stress reported significantly greater negative affective responses, negative attributions, and endorsed more verbal aggression toward threatening than non-threatening partner situations, compared to men with low gender role stress.

A recent study by Moore and Stuart (2004) examined the role of negative affect in the association between gender role stress and aggression. Specifically, they proposed that

individuals reporting high levels of gender role stress would endorse greater feelings of negative affect in masculine relevant threatening tasks, which may increase their risk of behaving violently. Men were divided into high or low gender role stress groups, listened to audio-taped vignettes depicting masculine relevant threatening and non threatening situations, and were then instructed to rate their affective responses to the vignettes. Several pertinent findings were revealed from their analyses. First, men high in gender role stress reported greater levels of state anger and negative affect than their low gender role stress counterparts. Additionally, men high in gender role stress reported increased negative attributions and verbal aggression in response to threatening situations compared to men low in gender role stress. In sum, it was found that men who experienced high levels of gender role strain were more likely to appraise intimate conflict situations as threatening, which resulted in elevated reports of negative affect, hostile intent, and verbal aggression.

The general picture that emerges in the research literature indicates that aggressive behavior perpetrated by men can best be understood as a complex interplay between masculine ideology and gender role stress. Several studies have shown that the degree to which a man experiences anger and reacts violently is largely a product of the interaction between situation-specific determinants, his level of gender role conflict, and his endorsement of masculine identity (Mahalik et al., 2003; Shepard, 2002). Thus, one circumstance for men's perpetration of physical violence may be conflict situations that are appraised as stressful and threatening to the male identity, which cause negative emotional states that are expressed through physical force. Likewise, the extent to which a man internalizes cultural values of the male ideal, desires to appear powerful, and appraises a given situation as threatening to his male identity, may increase

the probability that he will react violently. (Franchina, Eisler, & Moore, 2001; Moore & Stuart, 2004; Moradi, Tokar, Schaub, Jome, & Serna, 2000; Shepard, 2002).

Statement of Purpose

According to current theory regarding the link between masculine identity and interpersonal conflict, men's use of aggression may be caused by three inter-related components: 1) personal endorsement of masculine identity, 2) the degree to which a man adheres to prescribed gender role norms, and 3) negative emotions that arise from threatening situations. To date, no studies have examined the mechanisms by which aggressive behavior operates as a function of these three factors in a laboratory setting. The present study provided empirically-based data relative to understanding the underlying dimensions of masculine identity, by examining how masculine-relevant personality factors contribute to aggressive behavior. Four hypotheses were forwarded to test the common and unique contribution of masculine identity, gender role stress, and negative affect on aggressive behavior. First, it was hypothesized that masculine identity would be positively associated with physical aggression, such that high levels of masculine identity would predict high levels of aggression. Second, masculine gender role stress would be positively associated with direct aggression, such that high levels of gender role stress would be positively associated with direct aggression. Third, it was posited that gender role stress would moderate the relationship between masculine identity and aggression, such that at high levels of gender role stress, masculine identity would be significantly and positively associated with direct aggression and at low levels of gender role stress this relationship would not be significant. Fourth, as gender role stress has been considered an affective component of masculine identity (Jakupcak, Lisak, & Roemer, 2002; Moore & Stuart, 2004) it was

hypothesized that increased negative affect would emerge as a significant predictor of aggressive behavior, in addition to the effects of masculine identity and gender role stress.

CHAPTER 2

METHOD

Participants

Participants were 97 male undergraduate students recruited from the University research participant pool in the Psychology Department to participate in a study advertised as "An Examination of the Relationship Between Personality Traits and Reaction Time." Demographic data are presented in Appendix A, Table 1.

Materials

Screening Measure. A modified version of the Kinsey Heterosexual-Homosexual Rating Scale (KRS; Kinsey, Pomeroy, & Martin, 1948) is a self-report measure of sexual arousal and prior sexual experiences. It was used in the current study to screen for participants who are exclusively heterosexual. This version is a 7-point scale on which individuals separately rate their sexual arousal and sexual experiences from exclusively heterosexual (0) to exclusively homosexual (6). Only participants who report exclusively heterosexual arousal and experiences will be selected for participation. Cronbach alpha scores have been reported at .92 for men (Gangstead, Bailey, & Martin, 2000).

Masculine Identity. The Conformity to Masculine Norms Inventory (CMNI; Mahalik et. al, 2003) assesses the extent to which an individual man does or does not conform to the actions, thoughts, and feelings that reflect masculinity norms in the dominant culture in the U.S society. The CMNI was used in the current study to measure the extent to which heterosexual men conform to masculine gender roles. This instrument allows for a thorough examination of the variability between men on the endorsement of masculinity norms. It is comprised of 11 distinct

factors: *Winning, Emotional Control, Risk-Taking, Violence, Dominance, Playboy, Self-Status, Primacy of Work, Power over Women, Disdain for Homosexuals,* and *Pursuit of Status*. Respondents indicate the degree to which they agree with the 94-items on a 4-point scale. Internal consistency estimates for the total scale score is .94, and alpha coefficients for each of the subscales range from .71 to .92. Upon initial validation, test-retest estimates were .95 for the total CMNI score and ranged from .51 to .96 among the 11 subscales. Kappa coefficients for face and content validity ranged from .83 to 1.00 (Mahalik et al., 2003)

Gender Role Conflict Scale. The Gender Role Conflict Scale (GRCS; O'Neil et. al, 1986) measures personal dimensions of gender role conflict in men stemming from their fear of femininity. The GRCS was used to assess the extent to which heterosexual men experience gender role conflict. Respondents indicate their level of agreement with 37 items using a 6-point scale, with higher scores indicating greater gender role conflict. The GRCS is scored for four-factor analytically-derived subscales: *Success, Power, and Competition*; *Restrictive Emotionality*; *Restrictive Affectionate Behavior Between Men*; and *Conflict Between Work and Family Relations*. Concurrent validity has been demonstrated with positive correlations to attitudes about masculinity, fear of femininity, and hostile interpersonal behavior. Alpha coefficients range from .84 to .88 for the subscales and .91 for the GRCS total (Mahalik et al., 2003).

Masculine Gender Role Stress Scale. The Masculine Gender Role Stress Scale (MGRS; Eisler & Skidmore, 1987) consists of 40 items designed to assess men's experience of stress associated with cognitive, behavioral, and environmental events related to the male gender role. In the current study, the MGRS was used to examine men's experiences of gender role stress in the cognitive, behavioral, and environmental domains as it relates to specific situations.

Respondents rate a situation according to how stressful they feel it would be if it happened to them. Answers are measured using a 6-point scale, with higher scores indicating greater masculine role stress. The Alpha coefficient for total score reported by Mahalik et al. (2003) was .93, and subscale alphas ranged from .73 to .85.

Positive and Negative Affective Schedule. The Positive and Negative Affective Schedule (PANAS; Watson & Clark, 1994) is designed to assess experiences of positive and negative affect as well as anger and hostility. The PANAS was used in the current study to examine men's affective responses to a provocative reaction-time task. The PANAS consists of 20 mood descriptors comprising a 10-item Positive Affect (PA), a 10-item Negative Affect (NA) scale, and a 6-item Anger-Hostility (AH) scale. The PA scale contains the following terms: active, alert, attentive, determined, enthusiastic, excited, inspired, interested, proud, and strong. The NA scale contains the following terms: afraid, ashamed, distressed, guilty, hostile, irritable, guilty, hostile, jittery, nervous, scare and upset. The AH scale consists of the following items: angry, irritable, hostile, scornful, disgusted, and loathing. Respondents rate the extent to which they are experiencing each item on a 5-point scale. Alpha reliability coefficients range from .36 to .90 for the PA scale, .84 to .87 for the NA scale, and PA-NA inter-correlations ranging from -.23 to -.12 (Watson, Clarke, & Tellegen, 1988). The NA scale correlates strongly with neuroticism and the PA subscale correlates strongly with measures of extraversion (Watson & Tellegen, 1999).

Buss Aggression Questionnaire. The Buss Aggression Questionnaire (BAQ; Buss & Perry, 1992) is a 29-item scale that was used in the current study to assess self-reported dispositional aggression on four different dimensions: *Physical Aggression, Verbal Aggression, Anger,* and *Hostility*. Respondents rate each item on a 5-point scale. Buss and Perry (1992) reported high internal consistency for *Physical Aggression* at .85, *Verbal Aggression* at .72, *Anger* at .83, and

Hostility at .77. Alpha coefficient for the total score is high at .89. Test-retest reliabilities were .80 for *Physical Aggression*, .76 for *Verbal Aggression*, and .72 for both *Anger* and *Hostility*. Construct validity was demonstrated by positive correlations between measures of assertiveness and *Anger* (r = .40), emotionality and *Hostility* (r = .52), competitiveness and *Physical Aggression* (r =.36), and impulsiveness and *Verbal Aggression* (r = .31).

Response Choice Aggression Paradigm (RCAP). This aggression paradigm (Zeichner, Frey, & Parrott, 1999; Zeichner, Parrott, and Frey, 2003) was used to measure direct physical aggression under laboratory conditions, wherein participants were allowed to retaliate or to refrain from responding to provocation by an opponent. The option to refrain from aggression is a necessary improvement over many paradigms that do not include a non-aggressive alternative. In this paradigm, participants are placed in a competitive reaction time task where electrical shocks are received from and administered to a fictitious opponent following "win" or "lose" trials. The aggression console is a white metal box mounted with electrical switches and light emitting diodes (LEDs). Ten shock push buttons labeled "1" through "10" are arranged horizontally on the console. Shocks are generated by a Precision Regulated Animal Shocker (Coulbourn Instruments, Allentown, Pa). A reaction time switch is located at the center of the console.

The task is presented as a reaction time (RT) competition, in which the participant competes against a fictitious opponent who is ostensibly seated in an adjacent chamber. The participant is told that after a yellow "press" light illuminates on the console, he is to depress and hold the RT key. Shortly after the RT key is depressed, a green "release" light illuminates, at which time the participant is to release the RT key as quickly as he can. After a 3-sec result-determination period, a green "win" light or a red "lose" light illuminates, informing the

participant about the outcome of that trial. The participant is told that he has the choice to deliver shocks to his opponent following trials that are "won" or "lost" and is at liberty to do so as often as he desires throughout the task. The participant is told that 10 shock intensities are available for administration to the opponent as "punishment." Likewise, the participant is informed that the opponent can make similar choices. The participant is also told that he may refrain from administering shocks during the 24 trials of the experiment. Shocks administered to the participant are accompanied by visual feedback via LEDs paralleling the level of each given shock.

Aggressive behavior is measured using seven indices: *Mean Shock Intensity* (MSI; mean shock intensity for trials in which the participant administers a shock); *Mean Shock Duration* (MSD; mean shock-time duration for trials in which the participant administers shock); *Proportion of Highest Shock* (P10; number of times the participant uses the highest shock available for trials in which a shock is administered); *Flashpoint* (FP; number of trials that expire before the participant administers the first shock); *Flashpoint Intensity* (FPI; intensity of the first shock administered; *Flashpoint Duration* (FPD; shock duration of the first shock administered); and *Shock Frequency* (SF; the proportion of trials in which the participant administers shocks).

Procedure

After providing informed consent, participants completed the aforementioned packet of questionnaires and were seated at a table facing the aggression console in a sound attenuated chamber. Following a general explanation of the procedures, an assessment of participants' pain thresholds was conducted. First, to ostensibly assess the "opponent's" pain thresholds, the experimenter played a pre-recorded version of the fictitious "opponent" over the intercom, in which the opponent announced his reactions to shocks administered to his fingers. Next, the pain

thresholds were determined in an identical manner for each participant. This was accomplished via the administration of short duration shocks (.50-sec) in an incremental stepwise intensity method (8 milliamps) from the lowest available shock setting, which was imperceptible, until the shocks reached a reportedly "painful" level. Next, participants were told that they would compete in a reaction time task against an “opponent” seated in another chamber. During the task, each participant would have the opportunity to punish his opponent following each reaction time trial by administering a shock to the opponent and that the latter would be able to administer shocks likewise. The competition consisted of 24 successive RT trials on which participants received shocks set between 45% and 100% of their subjective "painful shock" level. All shocks were administered to the participants on trials they "lost" (half of the trials) and the win-lose sequence was presented in a predetermined randomized fashion and incorporated into the computer program that executes the task. Although the sequence is presented in a randomized fashion, all participants received the same sequence of trials. At the conclusion of the reaction-time task, participants completed the PANAS for the second time. After assessing the success of the deception, all participants were thoroughly debriefed, thanked, and given credit.

CHAPTER 3

RESULTS

Data Reduction

The following variables were in the data analysis.

Aggression. Aggression data were derived from the following RCAP indices: *Mean Shock Intensity* (MSI), which comprises the average shock intensity selection for trials in which the participant administerd a shock; *Mean Shock Duration* (MSD), which comprises the average shock hold-time (i.e., button press) for trials in which the participant administered a shock; *Proportion of Highest-Shock* (P10), which reflects the proportion of the number of times the highest available shock (i.e., a "10") was delivered relative to the number of all other selected shocks; *Flashpoint Intensity* (FPI), which reflects the intensity of the first shock selected by the participant; *Flashpoint Duration* (FPD), which reflects the shock hold-time of the first shock selected by participants; and *Shock Frequency* (SF), which is the proportion of trials in which shocks were delivered throughout the competition relative to all trials.

Masculine Identity. This variable was determined by the composite score on the Conformity to Masculine Norms Inventory (CMNI).

Gender Role Stress. The appropriate measure for gender role stress was assessed by examining the strength of the bivariate correlations of the Gender Role Conflict Scale (GRCS) and Masculine Gender Role Stress scale (MGRS) with masculine identity. The GRCS and MGRS were significantly correlated ($r = .62$, $p < .01$), indicating that the two measures capture convergent aspects of masculine gender role stress. However, a Pearson Product-moment

correlation matrix revealed that the GRSC scale was significantly correlated with masculine identity (r =.29, p < .01), while the MGRS was not (r =.19, p >.05). The MGRS was excluded from the analyses that follow due to its non-significant correlation with masculine identity and for its face validity as a state measure of gender role stress. The GRCS appeared more representative of dispositional role stress.

Dispositional Aggression. The variable was determined by the scores on the *Physical Aggression* (PA), *Verbal Aggression* (VA), *Anger* (A), and *Hostility* (H) subscales of the BAQ.

Affective Response. Change that occurred in participants' affective response between measures taken prior to and after their participation in the paradigm was assessed by subtracting the composite scores on each of the three PANAS subscales obtained after the task from scores obtained at the outset of the study. The purpose for computing a difference score was to control for baseline differences among participants. Affective response was assessed by the following three measures: *Positive Affect* (PA), which was derived from 10 items of the PANAS (interested, excited, strong, enthusiastic, proud, alert, inspired, determined, attentive, active); *Negative Affect* (NA), which was derived from 10 items on the PANAS (disinterested, upset, guilty, scared, hostile, irritable, ashamed, nervous, jittery, afraid); and *Anger/Hostility* (AH), which was derived from six items on the PANAS (scornful, hostile, angry, irritable, loathing, disgusted).

Preliminary Analyses

Manipulation Check. To verify success of the deception, participants were asked prior to debriefing to rate their impression of their opponent, whether the opponent was reasonable during the task, and whether they felt that the task was a good test of reaction time. The majority of participants (77%) indicated that the task was a good measure of their reaction time. Typical

responses regarding participants' opponents included the following: "I was generally faster than my opponent" and "The task was a good measure of my reaction time."

As mentioned above, the manipulation was successful for 75 (77%) of the 97 participants. In order to evaluate potential differences between those who were not successfully deceived and those included in the final experimental sample, separate one-way ANOVA's were performed on pertinent demographic (i.e, age, years of education, yearly income) and experimental variables (i.e., masculine identity, gender role stress, physical aggression). Analyses did not detect any significant differences for these variables.

Thirteen men (17%) chose not to administer any shocks during the competition and 62 men shocked their opponent on at least one trial. Performing one-way ANOVA's, analyses did not detect any differences between these groups on pertinent demographic and experimental characteristics.

Demographic Characteristics. Multivariate analysis of variance (MANOVA) tests revealed no significant differences in the RCAP indices across racial groups and categories of income. Differences between categories of relationship status (single vs. cohabiting) were not examined given the small sample size of those in the cohabiting group (N = 2).

Pearson product-moment correlation coefficients indicated that age was significantly correlated with Mean Shock Duration ($r = .24$, $p < .05$) and Flashpoint Duration ($r = .30$, $p < .01$). To control for the effects of this variable, age was entered in the first step of the hierarchical regression analysis when Mean Shock Duration and Flashpoint Duration were used as the dependent variables of interest (discussed below).

Dispositional Aggression. To examine the concurrent validity of the masculine identity and gender role stress constructs, Pearson product-moment correlation coefficients were computed to

examine relationships for the four subscales of the BAQ and CMNI and GRCS total scores. Analyses revealed significant and positive correlations between the BAQ PA subscale and the GRSC total score, $r = .25$, $p < .05$. BAQ H was positively correlated with CMNI total, $r = .29$, $p < .05$, GRCS total, $r = .56$, $p < .01$, and MGRS total, $r = .47$, $p < .01$.

Means, standard deviations, and inter-correlations among masculine identity, gender role stress, RCAP indices, and BAQ subscales are presented in Appendix A, Table 2.

Moderating Effects of Gender Role Stress

The principal focus of the present study was to determine whether gender role stress would moderate the relationship between masculine identity and direct physical aggression. Moreover, given the positive and significant correlations between masculine identity and gender role stress, moderation analyses would allow for the investigation of the multiplicative influence of both variables on aggressive behavior. Specifically, it was hypothesized that men high in gender role stress would evince a strong positive relationship between masculine identity and physical aggression, whereas it was postulated that men low in gender role stress would demonstrate no relationship between identity and aggression.

Given that gender role stress is continuous in nature, linear regression analyses were indicated to test for moderation(Aiken & West, 1991; Baron & Kenny, 1986; Cohen & Cohen, 1983; Pedhazur, 1997). Separate equations were calculated such that the total score of the CMNI (Identity) was regressed on each of the seven RCAP indices, using the score on the GRCS (Stress) as the moderator variable.

The recommendations of Aiken and West (1991) and Jaccard and Turrisi (2003) were followed to test for moderation effects using multiple regression. In this approach, it is necessary to compute a product term between the independent variable of interest and the moderator

variable. This requires that scores be standardized (i.e., z-transformed) to reduce multicollinearity between interaction terms and their lower-order terms and to account for scale invariance. Standardizing scores also allows for regression coefficients to be interpreted within the same metric (Aiken & West, 1991; Cohen & Cohen, 1983; Jaccard & Turrisi, 2003). Scores for the CMNI and GRCS were converted to z-scores and interaction terms were calculated by obtaining the cross-products of the first order variable scores. Unstandardized regression coefficients were interpreted (and reported below) because the interpretation of standardized coefficients would yield incorrect effects (see Aiken & West, 1991). Thus, parameter estimates for regression equations are reported as unstandardized *b*'s. The significance value of the interaction term was examined to determine whether moderation significantly improved the equation. For equations with no significant moderation, regression coefficients reflecting main effects are reported below. For equations with significant interaction terms, regression coefficients for simple effects (one standard deviation above and one standard deviation below the mean of gender role stress) were tested to determine whether they were significantly different from zero.

Using Stress as the moderator and Identity as the focal independent variable, separate regression equations were computed for each of the seven RCAP indices. Main effects were entered into the first step of a hierarchical regression analysis and the Identity x Stress term was entered in the second step. For those cases where MSD or FPD was the dependent variable, age was entered in the first step as the covariate, main effects were entered in the second step, and the interaction term was entered in the third step. Only significant main and moderating effects are reported below. Appendix A, Table 3 displays to the main effects for the regression analyses

and Appendix A, Table 4 displays significant interaction effects and their simple effects beta weights.

Mean Shock Intensity. Significant main effects for Identity ($b = .78$; $p < .05$) and Stress ($b = .67$; $p < .05$) were found. The overall main effects model was significant and accounted for approximately 17% of the variance in aggression, $R^2 = .17$, $F(2, 72) = 7.58$, $p < .01$.

Mean Shock Duration. With age entered as the covariate, the main effects model was marginally significant, $R^2 = .09$, $F(3, 71) = 2.59$, $p < .06$. A main effect for Stress approached significant when age was not entered as a covariate ($b = .23$; $p < .06$).

Proportion 10. There was a significant main effect for Identity ($b = .07$; $p < .05$). The overall main effects model for Identity and Stress was significant and accounted for approximately 12% of the variance in aggression, $R^2 = .12$, $F(2, 72) = 4.79$, $p < .01$.

Flashpoint. The main effects model for Identity and Stress was significant and accounted for approximately 8% of the variance in aggression, $R^2 = .08$, $F(2, 72) = 3.16$, $p < .05$.

Flashpoint Intensity. A significant Identity x Stress interaction with FPI as the dependent variable was found ($b = -.62$; $p < .05$). A plot of the interaction indicated that under high levels of gender role stress, Identity was not significantly related to FPI ($b = -.13$; $p > .05$) and that under low levels of gender role stress, Identity was significantly and positively related to FPI ($b = 1.1$; $p < .05$). See Appendix B, Figure 1. The main effects model was not significant. The interaction model was marginally significant, $R^2 = .08$, $F(3, 71) = 2.29$, $p < .08$ and significantly improved the main effects model, $\Delta R^2 = .05$, $\Delta F = 4.44$, $p < .05$.

Flashpoint Duration. With age entered as a covariate, there was a marginally significant main effect for Stress ($b = 111.80$; $p < .07$). The overall main effects model with age as a

covariate was significant, R^2 = .10, $F(3, 71) = 3.85$, $p < .01$. When age was not entered as a covariate, there was a significant main effect for Stress ($b = 129.58$; $p < .05$).

Shock Frequency. There was a significant Identity x Stress effect for SF as the dependent variable ($b = -.31$; $p < .05$). No relationship between Identity and SF at high levels of gender role stress was noted ($b = -.02$; $p > .05$), but a positive and significant relationship was found between Identity and SF at low levels of stress ($b = .11$; $p < .01$). See Appendix B, Figure 2. The interaction model was significant, R^2 = .42, $F(3, 71) = 5.08$, $p < .05$, and significantly improved the main effects model, $\Delta R^2 = .07$, $\Delta F = 6.65$, $p < .01$. Results also demonstrated a significant main effect for Stress ($b = .07$, $p < .05$).

Effects of Negative Emotionality

The final hypothesis of the study proposed that negative emotionality would emerge as a significant predictor of aggressive behavior. Thus, to examine whether negative affect was a significant factor in the Identity x Stress interaction effect on aggression, a three-way Identity x Stress x Affect interaction was examined for each RCAP index. To verify that the task had an effect on emotionality, three paired samples t-tests were conducted to measure responses on changes scores on the PA, NA, and AH subscales of the PANAS before and after the reaction time task. Results indicated a significant increase in the PA and AH subscales after the reaction time task, $t(74) = 2.81$, $p < .01$ and $t(74) = -4.21$, $p < .01$, respectively. These results also provide evidence that the experimental manipulation was successful, as participants endorsed greater feelings of arousal, alertness, and hostility after the provocation.

The recommendations of Aiken and West (1991) were followed to test for the three-way interaction. In this approach, regression models are computed over a series of steps. First, masculine identity, gender role stress, change in affect (PA, NA, or AH), and pertinent higher

order interaction terms are entered into one model and regressed on a given index of physical aggression. This model tests for the interactive effect of masculine identity, gender role stress, and change in affect on physical aggression. Second, the simple slope is tested for significance at high and low values of gender role stress ($\pm$ 1 SD) and high and low values of affect change ($\pm$1 SD). Thus, if a three-way interaction is found, separate regression models are computed in order to test for the effects of masculine identity on aggression at high and low values of both gender role stress and change in affect. Appendix A, Table 5 reports the effects of the three-way interaction.

For MSI, the overall model was significant, $F(7, 67) = 4.83$, $p < .01$, $R^2 = .34$. The Identity x Stress x Positive Affect interaction was also significant, $b = -.81$, $p < .05$. See Appendix B, Figure 3. Explication of the interaction revealed that the simple slope for high changes in positive affect (indicative of greater arousal) at low levels of gender role stress and masculine identity was significant, $b = 2.33$, $p < .01$. At high levels of affect change and gender role stress, masculine identity was not significantly related to aggression ($b = -1.13$, $p > .05$). Moreover, there was no significant relationship between identity and aggression at low changes in negative affect couple with either high gender role stress ($b = .46$, $p > .05$) or low gender role stress ($b = .24$, $p > .05$). For all other aggression indices, no significant three-way interactions were detected.

Hierarchical regression analyses were performed to determine whether PA, NA, or AH change scores would explain a significant proportion of variance in aggression, over and above the contribution of masculine identity and gender role stress together. In this approach, separate regression models were computed for each RCAP index over a series of steps. First, masculine identity and gender role stress were entered in the first step of the hierarchical regression

equation. Second, a given PANAS change score was entered in the second step. Results from the hierarchical regression analyses revealed only one significant effect of negative emotionality. The AH subscale explained a significant proportion of variance in aggression measured by FPD, over and above the contribution of masculine identity and gender role stress, $\Delta R^2 = .04$, $p < .05$. The overall model accounted for 19% of the variance in aggression, $R^2 = .19$, $F(4, 70) = 3.96$, $p < .05$.

CHAPTER 4

DISCUSSION

The results of the present study support several of the hypotheses. First, data indicated that masculine identity was significantly and positively correlated with several indices of the RCAP and dispositional measures of aggression. Specifically, at high levels of masculine identity, men delivered more extreme shocks for a longer duration than individuals with low levels of masculine identity. Dispositional aggression, particularly hostility, was also significantly correlated with male ideology. Gender role stress, posited as an experiential component of the male identity, was significantly and positively correlated with measures of direct physical aggression (i.e., shock latency, average shock intensity, duration of first shock delivered, and shock frequency) and demonstrated low to moderate relationships with measures of dispositional aggression, as measured by the BAQ Hostility and Physical Aggression subscales. As with identity, high role strain significantly predicted greater levels of aggressive behavior, such as average shock intensity and proportion of shocks delivered during the competition, compared to individuals with low role strain. These findings are consistent with previous studies in the area (Jakupcak, Lisak, & Roemer, 2002; Mahalik et al., 2003; Moore & Stuart, 2004) and suggest that men who rigidly adhere to prescribed social norms of the male identity may react impulsively and with hostile intent toward another, particularly under conditions of provocation.

One perspective previously discussed in the literature to explain these findings is that men are socialized to appear dominant and powerful. They may, therefore, learn to use physical

force or domineering approaches to resolve conflicts and cope with confrontational situations. In the investigation by Jakupcak, Lisak, and Roemer (2002), men who considered themselves highly masculine endorsed the use of physical and verbal aggression to resolve conflicts, particularly under high levels of role strain. Fitzpatrick and colleagues (2004) found that male ideology correlated significantly with self-reported aggression and also predicted psychological victimization as well as the use of aggression in intimate partner conflict. In the current study, strong endorsement of the masculine identity was positively and significantly predictive of the use of direct physical aggression against a male opponent and supports previous findings in the literature. Coupled with the observation that men with high gender role stress also displayed strong aggressive responses against their opponent, it is evident that masculine identity and gender role stress are intricately related and function as key determinants in the perpetration of physical, interpersonal aggression by men.

The hypothesis regarding moderating effects of gender role stress on the relationship between masculine identity and aggressive behavior was only partially supported. It was posited that in men high in gender role stress, masculine identity would exert a significant influence on the prediction of aggressive behavior, whereas in men low in gender role stress men, the effect of identity on aggression would be non-significant. Although these findings were not demonstrated, the results did indicate two significant moderation effects of role strain on aggression, specifically, Flashpoint Intensity and Shock Frequency. Notably, masculine identity and gender role stress together accounted for between 9% and 17% of the variance in aggression, a moderate effect size (Cohen & Cohen, 1983). A post hoc analysis revealed that, while gender role stress had a multiplicative effect on the relationship between masculine identity and aggression, this effect was only apparent at low levels of role strain. In contrast, at high levels of gender role

stress, aggression remained stable across all levels of masculine identity. Moreover, men who endorsed high levels of gender role stress delivered higher shocks upon initial retaliation and shocked more frequently than their low stress peers.

Although these findings are incongruent with the stated hypothesis, they are similar to findings reported in other studies (Jakupcak, Lisak, & Roemer, 2002) and suggest that the effect of masculine identity on aggressive behavior is conditional upon a man's experience of his identity and ability to adhere to prescribed role norms. Thus, men who do not over-identify with the masculine role may not be overly concerned about adhering to gender role norms (i.e., experience low gender role stress) and may be less likely to "prove" themselves, by using conflict tactics, during a challenging competition. The present study suggests that men high in masculine identity behave aggressively as a result of learned social processes (i.e., enacting the appropriate masculine script), rather than over-compensating to the male ideal following a perceived threat. Conversely, men high in gender role stress behave aggressively regardless of identity status, due to their perception that they may violate male role norms. Therefore, they may be more likely to establish or confirm their male status through acts of dominance. Additionally, men who endorse high masculine ideology, coupled with high levels of gender role stress, may perceive themselves as appearing less masculine than their peers and compensate for this threat by over-conforming to the masculine ideal. In both instances, the data indicate that aggression functions as a (adaptive) strategy that allows highly masculine men to maintain a sense of identity and men high in gender role stress to appear powerful, dominant, and strong (Mahalik et al., 2003).

The final hypothesis of the study posited that negative emotionality would emerge as a key determinant in the moderation effect. This hypothesis was partially supported. A significant

interaction between masculine identity, gender role stress, and negative emotionality was found for the Mean Shock Intensity index. Post hoc analyses of this interaction revealed only one significant simple effect: masculine identity positively predicted aggressive behavior when participants had experienced an increase in arousal at low levels of gender role stress. This finding is not consistent with other studies that posited that men's experience of negative emotionality in conflict situations may be a driving force behind their reports of gender role stress (Moore & Stuart, 2004). The present findings do indicate, however, that men who endorse low gender role stress experience strong emotions under competitive conditions, which may drive them to react violently. It remains unclear from the data whether men low in gender role stress men react aggressively at high levels of masculine identity to cope with negative emotional experiences, or, whether they experience negative emotions because they have been hostile toward their opponent and do not ascribe to male role norms that condone this type of behavior. Further investigation on the causes and sequelae of this process in men is warranted.

Several unexpected effects were found from interaction of masculine identity, gender role stress, and affective change and are briefly discussed below. First, men high in gender role stress who experienced a low change in arousal evinced equal amounts of aggression at high and low levels of masculine identity. Second, those with a high increase in arousal behaved aggressively at high levels of stress and low ideology. Taken together, these findings provide preliminary evidence that the effect of gender role stress on aggressive behavior may override that of masculine identity. That is, regardless of ideology, men high in gender role stress delivered high shock intensities even at low levels of arousal. One explanation for this may be that, regardless of the degree to which masculine identity is endorsed, men high in gender role stress who subsequently experience strong changes in affect are more likely to appraise conflict situations as

threatening, may experience anger or other negative emotions in response, and may therefore react with destructive behavior to attenuate high arousal. Given that emotional inexpressiveness is a key factor in the gender role stress construct, men with high role strain may not manage highly arousing or emotionally charged experiences via cognitive processes (Moore & Stuart). As such, men's subjective reports of stress may represent frequent experiences of affective arousal and physiological reactivity when male gender norms are threatened or violated. Thus, externalizing behavior may be an expression of negative internal states.

The present study adds to the literature in three ways. First, masculine identity has consistently been linked to self-reported physical aggression (i.e., Conflicts Tactics Scale) and to attitudes endorsing violence (Mahalik et al., 2003; Moore & Stuart, 2004). However, little research has examined effects of masculine identity and masculine role stress on direct physical aggression measured in the laboratory. Second, the laboratory aggression paradigm used in the current study affords the opportunity to assess physical direct aggression without the risk of measuring behavior that was forced on participants by experiment demand characteristics or without the measurement error that may be due to participant bias that is often associated with self-report questionnaires. The present procedure should allay some of the concerns raised by previous researchers as to the construct validity of the paradigm (Tedeschi & Quigley, 2000). While remaining an experimental analogue to aggression, not many participants in the present study elected to refrain from becoming aggressive, despite their option to do so and, as such, their responses reflect a volitional choice to retaliate against their provoker. Third, the RCAP allows for the study of intra-individual processes that may be activated when one chooses to inflict harm on another person. Thus, understanding the activation of aggression behavior as it

relates to dispositional constructs is central to the ability to identify the factors and conditions under which a provoked individual is brought to the point of retaliation.

The findings of the present study should be interpreted with caution. First, although regression equations provide powerful statistical analysis for determining moderation effects using historical subject characteristics, such analyses do not necessarily warrant conclusions of causality (Jaccard & Turrisi, 2003). Other factors that were not accounted for in the study may have affected the relationship between masculine identity and aggressive behavior. Second, given the small range in age and lack of diversity in terms of ethnicity, relationship status, and income in the sample, the findings may not be generalizable to men outside of the college setting. Indeed, previous studies using a college population have found similar results as those demonstrated in the current study (Jakupcak, Lisak, & Roemer, 2002), however, other studies have examined the relationship of gender role stress and masculine identity using clinical populations and found different results (Fitzpatrick et al., 2004; Kilianski, 2003). Third, although identity and gender role stress explained a significant proportion of the variance in aggression, this proportion is considered small to moderate (Cohen & Cohen, 1983).

As noted, simple product terms permit the investigator to test for the presence of moderated relationships. In principle, there is a wide variety of moderated relationships that can characterize the conditional effects of a focal independent variable on a dependent variable at particular values of a given moderator, and the number of possible functional forms can be infinite. The functional form used in the present study examined the slope between masculine identity and aggression as it changes in a linear, monotonic function at particular values of gender role stress. However, other types of functional forms were not tested in the present study. For example, the relationship between masculine identity and aggression may be nonlinear and

the failure to obtain statistically significant interactions for five of the seven RCAP indices may reflect the presence of an alternative functional form rather than the absence of a moderated relationship (Jaccard & Turrisi, 2003).

At present, more research is needed to clarify the interactive role of gender role stress on the relationship between masculine identity and aggressive behavior. The current study provides preliminary evidence that men with high levels of masculine identity and high levels of gender role stress are apt to behave aggressively in a provocative situation. Additionally, more research is needed to test whether increases in hostile and aggressive behavior may serve to attenuate negative internal states (e.g., increased arousal) and whether this relationship is specific to men with a strong desire to ascribe to male gender role norms.

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APPENDICES

Table A.1

Demographic Characteristics of Participants (N = 75)

Characteristic	n	%
Age (years)	--	--
M = 19		
SD = 1.3		
Years of Education	--	--
M = 14		
SD = 1.3		
Relationship Status		
Single	73	97.3
Cohabiting	2	2.7
Race/Ethnicity		
Asian	1	1.4
Black/African-American	8	10.7
Hispanic/Latino	1	1.4
White/Non-Hispanic	64	85.3
Other	1	1.3
Income ($)		
0-5,000	9	12.0
5,000-10,000	2	2.7
10,000-20,000	2	2.7
30,000-40,000	4	5.3
40,000-50,000	7	9.3
50,000-60,000	2	2.7
60,000-70,000	6	8.0
70,000 +	43	57.3

Table A.2

Means, Standard Deviations, and Inter-correlations for Masculine Identity, Gender Role Stress, RCAP Indices, and BAQ subscales

Measure	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. CMNI	134.6	9.9	--	.29**	.19	.35**	.02	.32**	-.22	.15	.02	.18	.09	.07	.13	.29*
2. GRCS	128.4	24.9		--	.62**	.32**	.22†	.22†	-.24*	.14	.23*	.30**	.25*	.05	.20†	.56**
3. MGRS	134.6	28.9			--	.07	-.07	.03	-.05	.06	-.02	.07	.28*	.15	.34**	.47**
4. MSI	4.7	2.8				--	.39**	.71**	-.65**	.74**	.23**	.47**	.09	.12	.05	.25*
5. MSD [a]	544.5	614.6					--	.19	-.46**	.15	.62**	.52**	-.16	-.17	-.17	.03
6. P10	.2	.3						--	-.14	.57**	.08	.07	.05	.05	-.07	.18
7. FP	9.1	10.0							--	-.33**	-.34**	-.74**	-.11	-.08	.04	-.20†
8. FPI	3.3	2.8								--	.18	.24*	.09	.06	.02	.14
9. FPD [a]	412.8	533.4									--	.38**	-.06	-.18	-.22	.10
10. SF	.3	.3										--	-.09	-.10	-.13	.14
11. BAQ PA	24.3	6.8											--	.45**	.55**	.24*
12. BAQ VA	14.3	3.7												--	.59**	.08
13. BAQ A	15.8	4.3													--	.42**
14. BAQ H	19.5	5.1														--

Note. CMNI = Conformity to Masculine Norms Inventory; GRCS = Gender Role Conflict Scale; MGRS = Masculine Gender Role Stress Scale; MSI = Mean Shock Intensity; MSD = Mean Shock Duration; P10 = Proportion of Highest Shocks; FP = Flashpoint; FPI = Flashpoint Intensity; FPD = Flashpoint Duration; SF = Shock Frequency; BAQ PA = BAQ Physical Aggression; BAQ VA = BAQ Verbal Aggression; BAQ A = BAQ Anger; BAQ H = BAQ Hostility.

[a] = measured in milliseconds; * $p < .05$; ** $p < .01$; † marginally significant.

Table A.3

Main Effects for Masculinity Variables as Predictors of Aggression

RCAP Index	CMNI *b*	GRCS *b*	Overall Model R^2	Overall Model *F*	Overall Model *df*
MSI	.78*	.67*	.17	7.58**	2, 72
MSD	-17.40	126.50	.09	2.59†	3, 71
P10	.07*	.03	.12	4.79**	2, 72
FP	-1.73	-1.92	.08	3.16*	2, 72
FPI	.33	.29	.03	1.16	2, 72
FPD	1.34	111.80†	.10	3.85**	3, 71
SF	.02	.07*	.09	3.92*	2, 72

Note. Degrees of freedom for MSD and FPD are based on the use of age as a covariate.
* $p < .05$; ** $p < .01$; † marginally significant.

Table A.4

Moderating Effects of Gender Role Stress

		Gender Role Stress				
	Identity x Stress	High	Low	Overall Model		
RCAP	*b*	*b*	*b*	R^2	$F(3, 71)$	ΔR^2
FPI	-.62*	-.13	1.1*	.08	2.29	.05*
SF	-.31*	-.02	.11**	.42*	5.08*	.07**

* $p < .05$; ** $p < .01$.

Table A.5

Effects of Gender Role Stress and Affective Change on the Association between Masculine Identity and Mean Shock Intensity

Predictor	*b*	*p*
Identity	.57	.09
Stress	1.12	.00
PA	-.14	.63
Identity x Stress	-.75	.03
Identity x PA	.27	.57
Stress x PA	.01	.96
Identity x Stress x PA	-.81	.05

Note. Identity x Stress x PA = Three-way interaction of masculine identity, gender role stress, and positive affect; PA = Positive Affect.

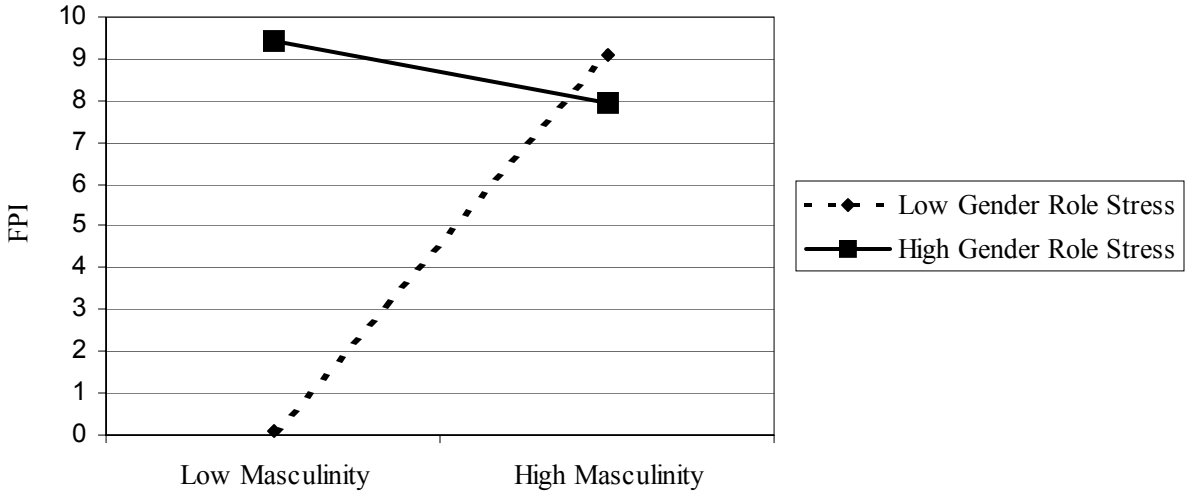

Figure B.1. Moderating effects of gender role stress on Flashpoint Intensity (FPI).

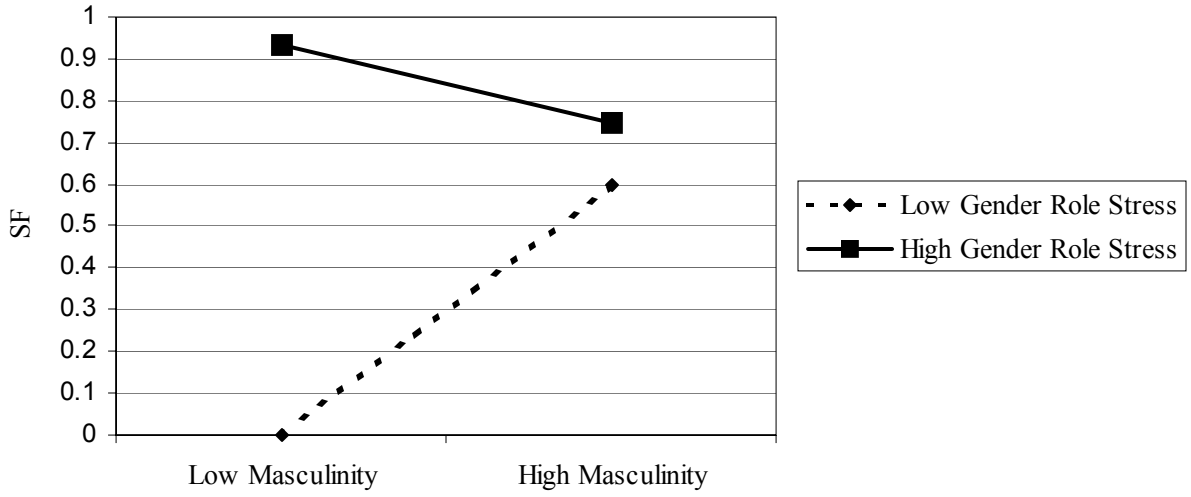

Figure B.2. Moderating effects of gender role stress on Shock Frequency (SF).

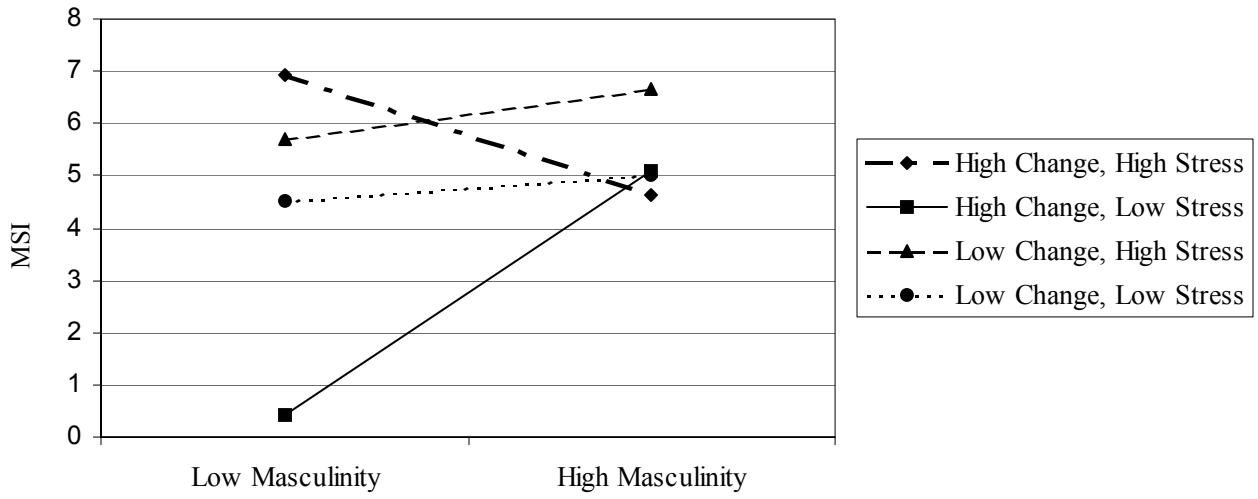

Figure B.3. Effects of negative affect and gender role stress on the association between masculine identity and Mean Shock Intensity (MSI).