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Aggression Toward Gay Men as Gender Role Enforcement: Effects of Male Role Norms, Sexual Prejudice, and Masculine Gender Role Stress

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Abstract

This study examined sexual prejudice and masculine gender role stress as mediators of the relations between male gender norms and anger and aggression toward gay men. Participants were 150 self-identified heterosexual men who completed measures of adherence to male gender role norms, sexual prejudice, masculine gender role stress, and state anger. Participants then viewed a video depicting intimate relationship behavior between two gay men, reported state anger a second time, and competed in a laboratory aggression task against either a heterosexual or a gay male. Results indicated that adherence to the antifemininity norm exerted an indirect effect, primarily through sexual prejudice, on increases in anger. Adherence to the status and antifemininity norms exerted indirect effects, also through sexual prejudice, on physical aggression toward the gay, but not the heterosexual, male. Findings provide the first multivariate evidence for determinants of aggression toward gay men motivated by gender role enforcement.

Keywords

Aggressive Behavior; Homosexuality (Attitudes Toward); Male Homosexuality; Prejudice; Masculinity

Numerous theories have been advanced to better understand the motives that facilitate aggression toward sexual minorities (for a review, see Franklin, 2000; Parrott, 2008). Specifically, extant literature suggests that male-perpetrated aggression toward gay men functions to enforce traditional gender norms (Hamner, 1992; Kite & Whitley, 1998), prove one's heterosexuality and masculinity to other men (Franklin, 2000; Kimmel, 2000), satisfy thrill seeking desires (Franklin, 1998, 2000), and reduce anxiety elicited by psychological conflicts associated with gender and sexuality (Franklin, 2000, Herek, 1986). Although empirical research supports these general distinctions (Franklin, 2000), any given act of aggression toward gay men or other sexual minorities is likely motivated by the convergence of multiple motives.

Given this proliferation of theoretical explanations, empirical study of these motives is of the utmost theoretical and applied importance. In particular, emphasis on individual and situational determinants of aggression toward sexual minorities informs theory by elucidating specific variables that cause individual attacks. In turn, this information may guide risk assessment and intervention targeted toward the individual. To this end, Parrott (2008) reviewed individual and situational risk factors and mediating pathways for aggression toward sexual minorities

that are associated with these motivations. This conceptualization represents an application of the General Aggression Model, which is a parsimonious theory that can explain the variety of motives for aggressive behavior (for a review, see Anderson & Bushman, 2002). The purpose of the present article is to examine simultaneously the effects of multiple risk factors associated with one theoretically derived motivation for male-perpetrated aggression toward gay men – gender role enforcement. While investigation of other risk factors and motivations is clearly necessary and has been the focus of recent research (e.g., Franklin, 1998; Parrott & Peterson, 2008), their systematic investigation is beyond the scope of the present study.

Aggression Toward Gay Men Motivated by Gender Role Enforcement

Definition of risk factors

Theory and research suggest that antigay assailants motivated by gender role enforcement endorse *traditional beliefs about the male gender role*. These beliefs reflect adherence to a variety of separate norms, including: (a) Status, which reflects the belief that men must gain the respect of others, (b) Toughness, which reflects the belief that men are physically tough and inclined to be aggressive, and (c) Antifemininity, which reflects the belief that men should avoid stereotypically feminine activities (Thompson & Pleck, 1986). In addition, *sexual prejudice* has been identified as an important determinant of aggression toward gay men (Parrott, 2008). Herek (2007) advanced a theoretical framework, based upon the construct of sexual stigma, to support this view. Sexual stigma, which is expressed at both the societal and individual level, is defined as “the negative regard, inferior status, and relative powerlessness that society collectively accords to any nonheterosexual behavior, identity, or relationship” (Herek, 2007, p. 906–907). The manifestation of sexual stigma in social customs and institutions (e.g., religion, language) is termed heterosexism and provides a sociocultural context that sanctions aggression toward sexual minorities (Franklin, 1998; Herek, 1990, 2004, 2007; Niesen, 1990; Pharr, 1988). At the individual level, heterosexuals’ internalization of sexual stigma is manifested as sexual prejudice, which encompasses “all negative attitudes based on sexual orientation, whether the target is homosexual, bisexual, or heterosexual” (Herek, 2000a, p. 19). Thus, regardless of a perpetrator’s motivation(s), all acts of aggression toward sexual minorities are enacted within a heterosexist context. However, as reviewed later, aggression toward gay men motivated by gender role enforcement is likely rooted in sexual prejudice. Indeed, studies indicate that sexual prejudice is strongly associated with adherence to traditional gender roles (e.g., Kilianski, 2003; Parrott, Adams, & Zeichner, 2002; Sinn, 1997; Whitley, 2001).

Parrott (2008) posited that men who experience stress associated with threats to their masculine identity may be at heightened risk to engage in aggression toward sexual minorities. Indeed, men’s tendency to experience gender-relevant stress, termed *masculine gender role stress*, leads them to “experience stress when they judge themselves unable to cope with the imperatives of the male role or when a situation is viewed as requiring ‘unmanly’ or feminine behavior” (Eisler & Skidmore, 1987, p. 125). In contrast to masculinity ideology, which reflects the internalization of cultural norms regarding masculinity, masculine gender role stress refers to the negative effects that result from adhering to these prescribed standards of masculinity. Accordingly, men who report high levels of masculine gender role stress are posited to display increased anger or aggression in situations that involve behavior inconsistent with traditional male gender role norms (e.g., being in the presence of two gay men). Finally, *exposure to violations of the male gender role* may motivate perpetrators to attack gay men in an effort to enforce gender norms (Herek, 1986, 1988). Thus, inasmuch as male-male intimate or sexual behavior is viewed as an extreme gender role violation, gay men are especially high risk targets for male assailants who seek to enforce traditional gender norms.

Theoretical overview

Socialization pressures that facilitate adherence to traditional gender roles are believed to elicit higher levels of prejudice, anger, and aggression toward sexual minorities (Herek, 1986; Kite & Whitley, 1996, 1998). However, these effects are thought to be especially pronounced in young heterosexual men, because gender norms are more rigidly prescribed for, and adhered to by, men than women (Bosson, Taylor, & Prewitt-Freilino, 2006; Hort, Fagot, & Leinbach, 1990; Kite & Whitley, 1996). Indeed, pertinent theory posits that masculinity is defined in part by that which is not feminine (Brannon, 1976; Deaux & Kite, 1987; Kimmel, 1997; Kite, 2001; Pleck, 1981). As such, the most critical component in one's developing masculine identity is arguably "not being like women" (Kimmel, 1997; pg. 229). This view is supported by research suggesting that male sexual prejudice and aggression toward gay men are products of masculine socialization generally (Shields & Harriman, 1984) and the endorsement of an antifemininity theme within the male role specifically (Parrott et al., 2002; Thompson, Grisanti, & Pleck, 1985). Indeed, research indicates that gay men are perceived to possess more female sex-typed qualities that violate traditional male gender norms (Kite & Deaux, 1987; Madon, 1997) than positive female-sex typed attributes (Madon, 1997). Thus, inasmuch as heterosexual men perceive gay men to be like women, endorsement of the antifemininity norm should be particularly related to prejudice, anger, and aggression toward gay men.

In accordance with this theoretical conceptualization, research indicates that heterosexual men's attitudes toward gay men are generally more negative than their attitudes toward lesbians (Gentry, 1987; Herek, 1988; Kite, 1994; Lim, 2002, Whitley, 1987). One interpretation of this consistent finding in the literature is that male homosexuality represents a threat to the masculinity of heterosexual men. As such, one function of aggression toward gay men is to alleviate this threat by making clear distinctions between male and female gender roles (Franklin, 2000; Herek 1986; 1988; Kite & Whitley, 1998). In short, aggression toward gay men serves a social-expressive function that "defines group boundaries (with gay men on the outside and the self on the inside)" (Herek, 1986; pg. 573) and is reinforced further via the reaffirmation of one's heterosexual masculine identity (Franklin, 1998; Hamner, 1990; Kimmel, 1997; Kite & Whitley, 1998). This view is consistent with social identity theory (Tajfel & Turner, 1986), which stipulates that individuals derive self-esteem by denigrating or attacking out-groups.

Empirical support

Several individual-level risk factors for aggression toward gay men motivated by gender role enforcement have been identified and received empirical support, including endorsement of traditional male gender role beliefs, sexual prejudice, masculine gender role stress, and exposure to male-male intimate behavior. Notably, although various forms of aggression are perpetrated toward sexual minorities (e.g., physical assault, verbal abuse, property damage, theft), most research in this area has focused on physical or verbal aggression.

Recent survey and laboratory-based research supports a positive link between traditional male gender role beliefs and aggression toward gay men. In a survey of nearly 500 young adults, Franklin (2000) found that a substantial proportion of antigay assailants perceived their actions to be enforcing gender norms. Consistent with this finding, survey-based research suggests that extreme adherence to the male gender role (i.e., hypermasculinity) is associated with aggression toward gay men (Whitley, 2001). Likewise, experimental research has shown that, among men who viewed sexual violations of the male gender role (i.e., male-male erotica), hypermasculinity predicted higher levels of physical aggression toward a gay, relative to a heterosexual, man (Parrott & Zeichner, in press). No such association was detected among men who viewed male-female erotica. Finally, a recent survey-based investigation found that adherence to traditional male gender norms, particularly the status and antifemininity norms,

was strongly associated with anger in response to gay men and that sexual prejudice and masculine gender role stress mediated these associations (Parrott, Peterson, Vincent, & Bakeman, 2008).

It is well established that sexual prejudice is a determinant of aggression toward gay men. Survey-based research has demonstrated a positive association between sexual prejudice and both anger and aggression toward gay men (Franklin, 2000; Parrott et al., 2008; Patel, Long, McCammon, & Wuensch, 1995; Roderick, McCammon, Long, & Allred, 1998). Of particular interest, Parrott and Peterson (2008) found that anger in response to gay men mediated the relation between sexual prejudice and aggression toward gay men. Likewise, laboratory studies have demonstrated that male sexual prejudice is positively related to increased anger in response to gay men and aggression toward gay, relative to heterosexual, targets (Bernat, Calhoun, Adams, & Zeichner, 2001; Parrott & Zeichner, 2005; Parrott, Zeichner, & Hoover, 2006).

Numerous studies support an association between masculine gender role stress and increased anger and aggression in response to female threats to masculinity (e.g., Eisler, Franchina, Moore, Honeycutt, & Rhatigan, 2000; Franchina, Eisler, & Moore, 2001). However, only one investigation has directly shown that masculine gender role stress was associated with a higher self-reported frequency of aggression toward gay men (Vincent, Parrott, & Peterson, 2008). Indirect evidence for this link was demonstrated by Talley and Bettencourt (2008). In their study, heterosexual men who experienced a masculinity threat behaved more aggressively toward a gay, relative to a heterosexual, male target compared to men who did not experience a masculinity threat. These findings were observed regardless of participants' endorsement of sexual prejudice. These data suggest that men who presumably experienced significant stress associated with their gender role were more likely to engage in aggression toward gay men.

Finally, research indicates that sexually prejudiced and hypermasculine men who are exposed to male-male erotica experience increases in anger and behave more aggressively toward a gay, relative to a heterosexual, man (Bernat et al., 2001; Parrott & Zeichner, 2005, in press). These data indicate that exposure to male-male gender role violations is an important situational risk factor for aggression toward gay men. Importantly, these data suggest that exposure to male-male gender role violations alone does not facilitate biased-aggression toward gay men. Rather, this situational risk factor seems to elicit aggression toward gay men only among perpetrators who endorse specific attitudinal risk factors (e.g., sexual prejudice, hypermasculinity).

Theoretical Integration

The reviewed literature highlights several risk factors associated with aggression toward gay men motivated by gender role enforcement. Given this recent promulgation of studies, it is important to place their findings into a framework that will bring clarity to the manner in which these risk factors work together, as well as their relative strength, in predicting anger and aggression toward gay men. This work is necessary because it will help explain current findings, improve causal theories of aggression toward sexual minorities, and highlight variables that should be targeted in clinical or preventative interventions. The reviewed literature suggests that sexual prejudice and masculine gender role stress arise from an extreme adherence to the male gender role and, as such, mediate the established link between male gender role beliefs and anger and aggression toward gay men (Franklin, 2000; Parrott & Zeichner, in press; Whitely, 2001). However, these mediational effects may vary as a function of the specific norm under investigation. Indeed, Parrott and colleagues (2008) found that antifemininity and status, but not toughness, were associated with anger in response to gay men and that these links were mediated by sexual prejudice and masculine gender role stress.

Unfortunately, this study did not assess aggression toward gay men. Thus, the extent to which these risk factors collectively facilitate aggression toward gay men has yet to be determined.

The Present Study

This laboratory-based study sought to examine two potential mediators of the relation between male gender role beliefs and anger and aggression toward gay men. Although pertinent theory (Parrott, 2008) and research (Parrott & Peterson, 2008) suggest that sexual prejudice and masculine gender role stress facilitate aggression toward gay men via increased anger in response to gay men, this hypothesis was not examined. As discussed by Lindsey and Anderson (2000), tests of mediation require that the assessment of the mediating variable (e.g., anger) not interfere with the assessment of the criterion variable (e.g., aggression). In most laboratory studies, it takes several minutes for participants to complete self-report measures of anger prior to engaging in an aggression task. Thus, high levels of anger that presumably mediate aggression toward gay men may dissipate over time.

The reviewed literature indicates that male gender role beliefs, sexual prejudice, and masculine gender role stress facilitate anger and aggression toward gay men that function to enforce traditional gender role norms. Whereas male gender role beliefs involve several different norms, sexual prejudice and masculine gender role stress are specific, unidimensional constructs that may affect anger and aggression more directly (Kimmel, 1997; Thompson, Pleck, & Ferrera, 1992). Thus, it was expected that sexual prejudice and masculine gender role stress would mediate the association between male gender role beliefs and (a) anger in response to intimate behavior between gay men (i.e., antigay anger) and (b) aggression toward a gay, but not a heterosexual, male (i.e., antigay aggression). However, pertinent theory suggests that the antifemininity norm, relative to other male role norms, is more closely related to negative responses to gay men (e.g., Parrott et al., 2008). Thus, the antifemininity norm was expected to exert the strongest direct and indirect influence on antigay anger and antigay aggression.

Method

Participants and Recruitment

Participants were 199 self-identified heterosexual undergraduate men who were recruited from various introductory psychology courses within the research participants pool of a large southeastern university. Men between the ages of 18 and 30 were selected because this demographic is consistent with typical perpetrators of aggression toward gay men (Harry, 1990; NCAVP, 2007). All participants responded to a study advertisement titled "The Relation Between Cultural Differences and Social Attitudes." Participants were informed that they would be required to complete a questionnaire battery (Session 1) and participate in a separate experimental session (Session 2). To mask the true aims of the study, additional questionnaires not pertinent to the aims of the present study were also administered during Session 1. As part of obtaining informed consent for Session 1, participants were told that the experimental session involved viewing a 3 minute video depicting relationship behavior of either a male-female or male-male dyad. In actuality, all participants viewed a video that depicted a male-male dyad.

From the initial sample, 198 men participated in the experimental session. To confirm a heterosexual orientation, the Kinsey Heterosexual-Homosexual Rating Scale (Kinsey, Pomeroy, & Martin, 1948) was administered to all participants. As recommended by Savin-Williams (2006), reliable assessment of sexual orientation is best achieved when: (a) self-identification, behavioral experiences, and sexual arousal are congruent, and (b) the highest priority is given to indices of sexual arousal. Indeed, self-identification and behavioral experiences are more susceptible to social context effects, self-report biases, and variable

meanings. Thus, among self-identified heterosexual participants, a heterosexual orientation was confirmed by endorsement of exclusive sexual arousal to females and sexual experiences that occurred predominately with women. Using these criteria, 34 subjects were removed from subsequent analyses, which left a final sample of 164 heterosexual men. Participants were then randomly assigned to complete Session 2 with a confederate who was depicted as a gay ($n = 78$) or heterosexual male ($n = 86$). The sample consisted of 68 Caucasians, 40 African-Americans, 36 Asian-Americans, and 20 individuals from other racial backgrounds. Participants reported means for age of 19.8 years ($SD = 2.3$), education of 14.2 years ($SD = 1.5$), and yearly family income of \$49,228 ($SD = \$29,121$). Ninety-eight percent of the participants were never married. All participants received course credit for completing both sessions. This study was approved by university's institutional review board.

Questionnaire Battery

Demographic form—This measure obtained information such as age, self-identified sexual orientation, race, relationship status, years of education, and yearly family income.

Kinsey Heterosexual-Homosexual Rating Scale (Kinsey et al., 1948)—A modified version of this instrument was used to assess prior sexual arousal and experiences. This 7-point scale asks participants to rate their sexual arousal and behavioral experiences from “exclusively heterosexual” to “exclusively homosexual.”

Male Role Norms Scale (Thompson & Pleck, 1986)—This 26-item inventory assessed three dimensions of masculine ideology: Status, which reflects the belief that men must gain the respect of others (e.g., “A man should always try to project an air of confidence even if he really doesn't feel confident inside”), Toughness, which reflects the belief that men are physically tough and inclined to be aggressive (e.g., “A good motto for a man would be ‘When the going gets tough, the tough get going’”), and Antifemininity, which reflects the belief that men should avoid stereotypically feminine activities (e.g., “It bothers me when a man does something that I consider ‘feminine’”). Participants were asked to rate each item on a scale from 1 (strongly disagree) to 7 (strongly agree), with higher scores corresponding to more traditional beliefs of the Status, Toughness, and Antifemininity norms. This tri-dimensional factor structure has been supported by both exploratory and confirmatory factor analyses (Thompson & Pleck, 1986; Sinn, 1997). In the present sample, alpha reliability coefficients of .81, .78, and .80 were found for Status, Toughness, and Antifemininity subscales, respectively.

Attitudes Toward Gay Men Scale (Herek, 1988)—Sexual prejudice was assessed with this 10-item Likert-type scale that specifically measures attitudes towards gay men. Scores range from 1 (extremely positive attitudes) to 9 (extremely negative attitudes). Sample items include “I think male homosexuals are disgusting” and “Homosexual behavior between two men is just plain wrong.” Herek (2000b, 2002) reports strong internal consistency and convergent validity for this scale, which was consistent with the present study ($\alpha = .92$).

Masculine Gender Role Stress Scale (Eisler & Skidmore, 1987)—This 40-item Likert-type scale assessed participants' tendency to appraise as stressful situations that conflict with the traditional male gender role. Participants rated items on a scale from 0 (not at all stressful) to 5 (extremely stressful), with higher scores reflecting higher masculine gender role stress. For example, items asked participants to rate how much stress they would feel if they were “comforting a male friend who is upset,” “perceived as having feminine traits,” or “with a woman who is more successful.” Although masculine gender role stress is related to masculine ideology (McCreary, Newcomb, & Sadava, 1997; Walker, Tokar, & Fischer, 2000), this construct is a “unique and cohesive construct that can be measured

globally” (Walker et al., 2000, p. 105). High internal consistency ($\alpha = .92$) was obtained in the present sample.

Aggression Paradigm

A modified version of the Taylor Aggression Paradigm (TAP; Taylor, 1967) was used to measure physical aggression. The hardware for the task was developed by Coulbourn Instruments (Allentown, PA) and the computer software was developed by Vibranz Creative Group (Lexington, KY). In the TAP, the participant is seated at a table in a small room. On the table facing the participant is a computer screen and a keyboard. Red adhesive labels marked “1” through “10” are attached to the number keys running across the top of the keyboard. The keyboard and monitor are connected to a computer located in an adjacent control room out of the participant’s view. The task is presented as a reaction time competition, in which the participant competes against a fictitious participant who is ostensibly “seated in an adjacent room.” As a part of the competition, electrical shocks are received from and ostensibly administered to the fictitious opponent. Physical aggression is defined as the average shock intensity (“1” through “10”) for trials in which the participant administers a shock, which represents an active and direct form of physical aggression.

The Taylor task and other similar shock-based laboratory paradigms have been repeatedly shown to be safe and valid measures of aggressive behavior (e.g., Anderson & Bushman, 1997; Giancola & Parrott, 2008). Research employing the TAP has also safely used alternative forms of punishment, including tone blasts (e.g., Bartholow & Anderson, 2002; Bushman, Ridge, Das, Key, & Busath, 2007), that do not appear to reduce the validity of the paradigm. Electric shocks were used in this study so that a well-established procedure for establishing a participant-selected maximum pain threshold (limited by hardware to 2.5 mA) could be employed (described later). Use of this procedure is critical to ensuring that each participant does not receive a shock that exceeds his subjective pain threshold. Unfortunately, a comparable procedure has not been extensively utilized or validated in studies using alternative forms of punishment. For instance, the majority of laboratory studies that utilize tone blasts administer these stimuli within a fixed range of 60 dB to 105 dB (about the same volume as a fire alarm).

Opponent Sexual Orientation Manipulation

At the outset of the study, the experimenter asked the participant several demographic questions (i.e., first name, year in college, study major, and relationship status) that were ostensibly videotaped for the purpose of informing the participant’s opponent about who he would compete against. The participant was told that he would receive similar information about his opponent. Immediately prior to the reaction time task, the participant viewed a 20-sec video that portrayed his opponent (a confederate) as either a heterosexual or a gay man. Presentation of the video served to introduce the sexual orientation manipulation and to reinforce further to the participant that he was competing against another person. This video displayed the confederate answering the questions outlined above. In the gay male opponent condition, the confederate stated that he had been “dating his boyfriend, Steve, for the past two years.” In the heterosexual male opponent condition, the confederate stated that he had been “dating his girlfriend, Ashley, for the past two years.” In both opponent conditions, the confederate’s responses were provided in a measured, non-stereotypical fashion (e.g., he did not display stereotypical “gay affectations”). This general procedure has been successfully used in past studies (e.g., Parrott & Zeichner, 2005).

Exposure to Male-Male Intimate Behavior

Previous laboratory-based studies of heterosexual men’s anger and aggression toward gay men have employed sexually graphic stimuli as an analogue for actual exposure to gay men (e.g.,

Bernat et al., 2001; Mahaffey, Bryan, & Hutchison, 2005; Parrott & Zeichner, 2005). Although results from these studies made significant contributions to this literature, these stimuli possess low ecological validity. Realistically, heterosexual men are unlikely to put themselves in situations where they would be exposed to sexually graphic male-male interactions. Because of this limitation, it is unclear whether findings from these investigations stem from the essence of same-sex relationship behavior or the graphic sexual nature of the stimuli. To address this limitation and increase the ecological validity of the stimuli, the present study employed more widespread depictions of gay men to prime thoughts and feelings regarding male homosexuality. Specifically, participants watched a 3 minute color video that portrayed intimate relationship activity (e.g., holding hands, kissing, a marriage ceremony) between a male-male dyad. With the exception of public displays of affection, this video did not depict any explicit sexual contact.

Assessment of Anger

Participants' experience of anger was assessed with the 6-item Anger-Hostility scale from the Positive and Negative Affect Schedule-Expanded form (Watson & Clark, 1994). Presented in conjunction with 20 positive and negative affect items (Watson, Clark, & Tellegen, 1988), participants rate the extent to which they are experiencing each mood descriptor on a 5-point scale from 1 (*very slightly*) to 5 (*extremely*). Adequate internal consistency was obtained for both the pre- ($\alpha = .77$) and post-video administrations ($\alpha = .85$) of this scale.

Procedure

Participants came to the laboratory on two separate days. During Session 1, informed consent was obtained and all participants completed a questionnaire battery (previously described). For Session 2, which occurred no later than two weeks after Session 1, participants were met in a room separate from the aggression laboratory and informed consent was obtained. No participant declined to give informed consent after being provided a description of the study, including the use of electric shocks. In order to disguise the task as a measure of aggression, participants were given a fictitious cover story. They were informed that the purpose of the study was to determine the relation between relationship behavior and reaction time under competitive conditions. As such, they were informed that they would be watching a brief video of relationship behavior prior to engaging in a competitive reaction time task.

Participants were then escorted to the testing room, at which time the experimenter identified an adjacent room where the "opponent" was ostensibly seated. Participants then completed the Anger-Hostility Scale, were videotaped while answering demographic questions, and received instructions regarding the reaction time competition. They were informed that shortly after the words "Get Ready" appeared on the screen, the words "Press the Spacebar" would appear at which time they had to press, and hold down, the spacebar. Following this, the words "Release the Spacebar" would appear at which time they had to lift their fingers off of the spacebar as quickly as possible. A "win" was signaled by the words "*You Won. You Get to Give a Shock*" and a "loss" was signaled by the words "*You Lost. You Get a Shock.*" A winning trial allowed participants to deliver a shock to their opponent and a losing trial resulted in receiving a shock from their opponent. Participants were told that they had a choice of 10 different shock intensities to administer at the end of each winning trial for a duration of their choosing. Participants could not elect to not shock their opponent. However, participants were told that shock button "#1" would deliver a low intensity shock that is best characterized as "very mild" and "definitely not painful."

Participants' pain thresholds were then assessed to determine the intensity parameters for the shocks they would receive. This was accomplished via the administration of short duration shocks (one second) that increased in intensity in a stepwise manner from the lowest available

shock setting, which was imperceptible, until the shocks reached a subjectively-reported “painful” level. All shocks were administered through two finger electrodes attached to the index and middle fingers of the nondominant hand using Velcro straps. Participants were instructed to inform the experimenter when the shocks were “first detectable” and then when they reached a “painful” level. The threshold determination procedure was conducted while participants were seated in the testing room and the experimenter was in the adjacent control room. They communicated through an intercom. Immediately before assessing their pain thresholds, participants were informed that their opponent would undergo the threshold assessment first and that they would be able to hear their opponent’s responses to the procedure over an intercom. In actuality, a confederate answered the experimenter’s questions regarding the testing of his pain thresholds in accordance with a list of predetermined responses.

After the pain thresholds were determined, participants viewed the video depicting male-male relationship behavior on a monitor located adjacent to their computer. The experimenter controlled the video from a DVD player located in the control room. Following presentation of this video, participants (and the ostensible opponent) completed the Anger-Hostility Scale a second time, viewed the demographic interview of their opponent, were provided with a written explanation of the aggression task, and then began the reaction time competition. Immediately prior to the competition task, all participants were informed again that they could stop the experiment at any time without penalty.

The entire procedure consisted of two successive blocks of trials. The experimenter, other electronic equipment, and the computer that controlled the task were located in an adjacent control room out of the participants’ view. All shocks delivered to participants were one second in duration and ranged from 55% (a “1”) to 100% (a “10”) of the highest tolerated shock intensity. During the first block, participants received shock intensities of “1” and “2” after they lost a trial. During the next block, they received shock intensities of “9” and “10” after they lost a trial. Each block consisted of 16 trials (8 wins and 8 losses). There were two “transition trials” between the blocks. Participants lost both of the trials and received respective shock intensities of “5” and “6.” Thus, there were a total of 34 trials. This sequence of trials was intended to give the appearance of an increasingly provoking aggressive interaction. Following each trial, a specially designed “volt meter” and the illumination of one of the 10 “shock lights” [ranging from 1 (low) to 10 (high)] on the computer screen signaled to the participant the shock that he or the opponent selected. In actuality, reaction time was not measured and the competitive task was used to lead participants to believe that they were engaging in an adversarial interaction with another individual. A randomly generated win/loss sequence was predetermined and incorporated into the computer program that executed the task. All participants received the same sequence. A computer controlled the initiation of trials, administration of shocks to participants, and recording of their responses. Following the procedure, participants were fully debriefed about the use of deception, provided with detailed verbal and written descriptions of the study’s aims, compensated with course credit, and thanked.

Results

Manipulation Checks

Prior to debriefing, participants were interviewed to confirm their belief that they were competing against another individual on a “reaction time” task and that this task was not a measure of aggression. First, participants were asked whether or not they thought the task was a good measure of reaction time. Second, they were asked to provide an “impression” of their opponent and comment on whether they thought their opponent was “reasonable.” The main criteria for exclusion were participants’ beliefs that the “opponent” was fictitious and that the task was a measure of aggression. Of the 164 participants, 14 (9%) indicated that the task was

not a measure of reaction time and/or that their opponent was “bogus.” These participants were not included in data analyses and resulted in a final sample of 150 (Gay Male Opponent: $n = 73$, Heterosexual Male Opponent: $n = 77$). Next, participants were asked to provide an impression of the opponent’s sexual orientation. All participants correctly identified the stated sexual orientation of the confederate. Finally, none of the participants indicated becoming aware of the study’s aims following completion of their questionnaires in Session 1.

Preliminary Analyses

Means, standard deviations, and ranges for experimental variables are given in Table 1. To evaluate potential differences among participants who competed against a heterosexual or gay male opponent, a series of one-way ANOVAs were performed with age, years of education, yearly family income, status, toughness, antifemininity, sexual prejudice, masculine gender role stress, changes in anger after viewing the male-male relationship video, and physical aggression as dependent variables. No significant group differences were found for any of these variables. Correlations between experimental variables are provided in Table 2. Bivariate correlations of status, toughness, and antifemininity on change in anger in response to the male-male video (.25, .23, and .33, respectively) and physical aggression toward the gay (.39, .38, and .46, respectively), and heterosexual opponent (.44, .44, and .39, respectively) were all significant ($p < .01$). With the exception of the negatively skewed masculine gender role stress variable and the positively skewed change in anger variable, all variables were reasonably distributed (i.e., skew < 2.56 times its standard error). A reciprocal transform was required for these skewed variables to meet this criterion; the transformed variables were used for subsequent analyses (although analyses with the untransformed variables gave essentially identical results).

Effects of Male Role Norms, Sexual Prejudice, and Masculine Gender Role Stress on Antigay Anger and Aggression

Path analysis (Kline, 2005; Tabachnick & Fidell, 2007) was used to examine whether male gender role beliefs (status, toughness, and antifemininity) exerted direct and indirect effects (through sexual prejudice and masculine gender role stress) on (a) change in anger in response to the male-male relationship video, and (b) physical aggression toward a gay or heterosexual man (i.e., average shock intensity). In addition to providing indices of global model fit, this analytical approach enabled the examination of relationships between multiple predictor and criterion variables *simultaneously* while accounting for shared variance among the hypothesized mediators. In the present analysis, the following indices of model fit were utilized: a non-significant χ^2 value, comparative fit index (CFI) values greater than .95, and root mean square error of approximation (RMSEA) values less than .08 (Browne & Cudeck, 1993; Hu & Bentler, 1999; Vandenberg & Lance, 2000). All model analyses were conducted using LISREL Version 8.80 (Jöreskog & Sörbom, 2007) and were estimated using the maximum likelihood method.

Unmediated model—Path coefficients were estimated for an unmediated model that linked status, toughness, and antifemininity to sexual prejudice, masculine gender role stress, change in anger in response to the male-male video (i.e., change in antigay anger), and physical aggression toward a gay or heterosexual man. For associations between male role norms and physical aggression, a multi-group analysis was performed, such that paths were allowed to vary as a function of the opponent’s sexual orientation. In contrast, associations between male role norms and sexual prejudice, masculine gender role stress, and change in antigay anger were collapsed across opponent group. This was done because manipulation of the opponent’s sexual orientation occurred after all participants completed attitudinal measures and self-reported their experience of anger after viewing the male-male relationship video. Error variances and covariances for the three male role norms were estimated separately for each

opponent group. This model did not include paths from sexual prejudice and masculine gender role stress to change in antigay anger or physical aggression. This model fit the data adequately, $\chi^2(24, n = 150) = 35.6, p = .059, RMSEA = 0.08$ (90% CIs 0.00–0.14), CFI = .97, though the upper limit of the RMSEA confidence interval suggested caution in this interpretation.

Significant positive effects of status on masculine gender role stress ($\beta = .22, p = .031$) and sexual prejudice ($\beta = .19, p = .039$) were detected. Likewise, significant positive effects of antifemininity on masculine gender role stress ($\beta = .18, p = .05$) and sexual prejudice ($\beta = .31, p = .0005$) were detected. In contrast, the effects of toughness on masculine gender role stress and sexual prejudice were not significant. The effects of status, toughness, and antifemininity on change in antigay anger were not significant. Among participants who competed against the gay male opponent, a significant positive effect of antifemininity, but not status or toughness, on physical aggression was found ($\beta = .34, p = .017$). Among participants who competed against the heterosexual male opponent, effects of status, toughness, and antifemininity on physical aggression were not significant.

Mediated model—The mediated model included paths from sexual prejudice and masculine gender role stress to change in antigay anger and physical aggression. Again, a multi-group analysis was performed, such that paths predicting physical aggression were allowed to vary as a function of the opponent's sexual orientation. Likewise, error variances and covariances for the three male role norms were estimated separately for each opponent group. This model (Figure 1) fit the data: $\chi^2(18, n = 150) = 16.29, p = .572, RMSEA = 0.0$ (90% CIs 0–0.09), CFI = 1.0. Comparison of the unmediated and mediated models indicated that the mediated model provided a significantly better fit, $\Delta\chi^2(6) = 19.37, p < .01$. Significant direct effects were not detected between status, toughness, or antifemininity and change in antigay anger. However, a significant positive association was detected between sexual prejudice and change in antigay anger ($\beta = .19, p = .038$). The relation between masculine gender role stress and change in antigay anger was not significant. The indirect effects of status and toughness on change in antigay anger were not statistically significant. However, the total indirect effect of antifemininity ($\beta = .07, p = .052$) was statistically significant and operated more so through sexual prejudice ($\beta = .06$) than through masculine gender role stress ($\beta = .01$).

Among participants who competed against the gay male opponent, a significant positive association was detected between sexual prejudice and physical aggression ($\beta = .31, p = .009$). The association between masculine gender role stress and physical aggression was not significant. The total indirect effect of status on physical aggression was statistically significant ($\beta = .09, p = .050$) and operated more so through sexual prejudice ($\beta = .06$) than through masculine gender role stress ($\beta = .03$). The indirect effect of toughness on physical aggression was not statistically significant. The direct effect of antifemininity on physical aggression was no longer statistically significant (i.e., relative to the unmediated model). However, the total indirect effect of antifemininity was statistically significant ($\beta = .12, p = .020$) and operated more so through sexual prejudice ($\beta = .10$) than through masculine gender role stress ($\beta = .02$). Among participants who competed against the heterosexual male opponent, direct and indirect effects of status, toughness, and antifemininity on physical aggression were not significant. However, a significant positive association between masculine gender role stress on physical aggression was detected ($\beta = .24, p = .015$).

Summary—The three male role norms under investigation were not directly associated with changes in antigay anger. However, antifemininity exerted an indirect effect, primarily through sexual prejudice, on increases in antigay anger. Among men who competed against the gay male opponent, the total effect of antifemininity, but not status and toughness, on physical aggression was statistically significant. When controlling for sexual prejudice and masculine gender role stress, the direct effect of antifemininity was not significant. However, status and

antifemininity exerted statistically significant and positive indirect effects on physical aggression that operated primarily through sexual prejudice. In contrast, toughness had a statistically non-significant indirect effect on physical aggression. This pattern of findings was not observed among participants who competed against the heterosexual male opponent. In this group, only the effect of masculine gender role stress on physical aggression was significant.

Discussion

The central aim of this study was to test the hypothesis that sexual prejudice and masculine gender role stress mediate associations between male gender norms, particularly the antifemininity norm, and (a) anger in response to intimate behavior between gay men and (b) aggression toward a gay, but not a heterosexual, male. Results partially supported this hypothesis. Data indicated that antifemininity exerted a significant and positive indirect effect, primarily through sexual prejudice, on anger in response to gay men and aggression toward gay men. These findings are important because they suggest that adherence to the antifemininity norm was demonstrated by heterosexual men's endorsement of sexual prejudice and, in turn, their expression of anger and aggression toward gay men. To a lesser extent, these data suggest that adherence to the antifemininity norm elicits anger and aggression toward gay men among men high in masculine gender role stress. Indeed, among these men, male homosexuality represents a challenge to their view that heterosexuality is a necessary component of masculinity. In sum, these data support the view that adherence to the antifemininity norm is central to men's enforcement of traditional gender norms (Franklin, 1998). Results also showed that adherence to the status norm indirectly facilitated aggression toward gay men. As with findings for antifemininity, these data suggest that this indirect effect is mediated primarily by sexual prejudice.

One might expect an association between adherence to the toughness norm and aggression toward gay men. After all, endorsement of the toughness norm reflects the belief that men should be physically tough and inclined to be aggressive. Thus, men who equate aggression with masculinity should be at increased risk for aggression, especially in situations where the demonstration of masculinity is valued (e.g., interactions with gay men). Results did not support this hypothesis. Direct and indirect effects of toughness on aggression toward the gay male opponent did not reach significance. This finding further bolsters the conclusion that adherence to the antifemininity norm is fundamental to the enforcement of gender norms via aggression toward gay men. Nevertheless, although the direct effects of toughness (and status) on aggression toward the gay and heterosexual opponent were not statistically significant, the magnitude of these effects was larger toward the heterosexual opponent (toughness: $\beta = .20$; status: $\beta = .17$) than toward the gay opponent (toughness: $\beta = .11$; status: $\beta = .02$). Though speculative, this pattern might indicate that aggressing against gay men, who are a stigmatized and low status group, provides less opportunity to gain status and demonstrate one's toughness than aggressing against heterosexual men, who are part of the heterosexual in-group.

It should be pointed out that participants, on average, did not behave more aggressively toward the gay, relative to the heterosexual, male opponent. While this finding may seem counterintuitive, it is actually consistent with prior literature. Specifically, past experimental research has only observed differences in aggression toward gay and heterosexual men among heterosexual men who endorse specific risk factors (e.g., sexual prejudice, Parrott & Zeichner, 2005; hypermasculinity, Parrott & Zeichner, in press) and who have been exposed to sexual violations of the male gender role. Thus, it does not seem to be the case that gay men are always the targets of greater aggression than heterosexual men. Rather, differential levels of aggression toward gay men are more likely among perpetrators who have internalized sexual stigma (i.e., sexual prejudice) and been sufficiently "reminded" that gay men violate these traditional

gender norms. Given these data and the findings of the present study, it appears that exposure to a gay man or male-male intimate behavior alone are not sufficient to elicit aggression toward gay men.

Collectively, the present findings are generally consistent with prior research linking rigid adherence to the male gender role with anger in response to gay men and aggression toward gay men (Franklin, 2000; Parrott & Zeichner, in press; Whitley, 2001). However, they are first to demonstrate that adherence specifically to the status and antifemininity norms is associated with aggression toward gay men and that sexual prejudice mediates these associations. In addition, consistent with Parrott and colleagues (2008), these data showed that adherence to the antifemininity norm predicted more anger in response to gay men and that sexual prejudice was a key mediator of this link. Although the present study examined risk factors for aggression toward gay men, these same risk factors likely predict aggression toward other sexual minorities. In particular, despite the notion that men's eroticization of lesbians might mitigate anti-lesbian aggression (Louderback & Whitley, 1997), lesbians perceived to espouse stereotypically masculine attributes might also be high-risk targets. Indeed, endorsement of male role norms, sexual prejudice, and masculine gender role stress likely facilitates the perception that these women violate traditional gender roles or threaten one's masculinity which, in turn, increases the likelihood of aggression. Future research is needed to test this hypothesis.

What is especially interesting about the present findings is that masculine gender role stress did not emerge as a particularly strong mediator of the association between male gender norms and anger and aggression toward gay men. Pertinent theory and research suggest that men who report high levels of masculine gender role stress will display increased anger and aggression in situations that involve behavior inconsistent with traditional male gender norms (Eisler & Skidmore, 1987; Franchina et al., 2001; Vincent et al., 2008). Moreover, recent data suggest that masculine gender role stress partially mediates the association between antifemininity and anger in response to intimate behavior between gay men (Parrott et al., 2008). One explanation for this discrepancy may lie in methodological differences between this and prior research. In the present study, participants completed written self-report measures of masculine gender role stress and anger. In the study by Parrott and colleagues (2008), however, these same measures were administered orally by a male interviewer. In this latter design, requiring men to report verbally their experience of anger in response to intimate behavior between gay men might have elicited self-presentation biases, especially among men who reported high levels of masculine gender role stress. It is plausible that these biases compelled these men to reaffirm their masculine identity in their presentation to the male interviewer by endorsing stereotypically masculine attributes.

Though speculative, this explanation has important implications for predicting *when* and *why* masculine gender role stress might facilitate anger and aggression toward gay men. Specifically, situations in which real or perceived pressure from male peers is minimal (as in the present study) may be less likely to trigger negative reactions toward sexual minorities among men who report high levels of gender role stress. In contrast, situations that evoke one's need to self-present as masculine (e.g., in male groups) may be more likely to incite such reactions, especially among men who experience stress associated with their gender role. Indeed, many attacks on sexual minorities are perpetrated by small groups of men or by one man in front of others (Franklin, 2000; Weissman, 1992). Heterosexual perpetrators in these group-perpetrated attacks are presumably motivated, at least in part, to demonstrate their masculinity to their heterosexual male peers (Franklin, 1998, 2004). Masculine gender role stress may play a key role in this process. In other words, to the extent that high levels of masculine gender role stress reflect an underlying fragility in one's capacity to maintain a rigid masculine identity (Copenhaver & Eisler, 1996), these men should fear emasculation by their

peers and, as a result, be motivated to restore their masculine self-concept via aggression (Franklin, 1998; Hamner, 1990; Kimmel, 1997). Partial support for this view is provided by the finding that masculine gender role stress directly predicted aggression toward the heterosexual, but not the gay, male opponent. Indeed, this effect might suggest a role of masculine gender role stress in motivating participants to “prove” their masculinity to their heterosexual peer (i.e., the male opponent) rather than to enforce traditional gender norms.

This explanation may also be relevant to the non-significant association between status and anger in response to intimate behavior between gay men. Indeed, inasmuch as the status norm reflects the belief that men must gain the respect of others, adherence to this norm should increase men’s likelihood of self-presenting to other heterosexual men in a manner that may garner “respect” as a heterosexual male (e.g., reporting high levels of anger in response to intimate behavior between gay men). Consistent with this hypothesis, research that involved participants’ direct report of anger to a male interviewer (e.g., Parrott et al., 2008) found a significant indirect effect of status on anger toward gay men (mediated by sexual prejudice and masculine gender role stress), whereas the present study, which involved participants’ written self-report of anger in the absence of an experimenter, did not detect this effect. Clearly, future research is needed to compare the effects of masculine gender role stress and adherence to the status norm on anger and aggression toward gay men among individuals and small groups of men. Until such data are available, however, this explanation should be interpreted with caution.

The present study builds upon limitations in previous research. Adherence to traditional male gender norms, sexual prejudice, and masculine gender role stress have been identified as important individual-level risk factors for aggression toward gay men motivated by gender role enforcement (Parrott, 2008). However, prior experimental research on anger and aggression toward gay men has examined these risk factors separately (e.g., Parrott & Zeichner, 2005, in press). Among the few studies that tested multivariate explanations (e.g., Parrott et al., 2008; Patel et al., 1995), anger and aggression toward gay men were assessed retrospectively via self-report. As such, the cross-sectional nature of these studies could not determine important causal and temporal relationships among the variables. In contrast, the present experimental design examined the simultaneous effects of these risk factors on *in vivo* anger and aggression toward gay men in a controlled laboratory setting. As such, the present study provides, for the first time, multivariate experimental evidence for determinants of aggression toward gay men in keeping with pertinent theory on gender role enforcement (Franklin, 1998; Herek, 1986; Kimmel, 1997). Despite this advancement, it is widely accepted that multiple motives are likely at play in any given act of aggression toward sexual minorities. Clearly, more research is needed to properly elucidate the etiological pathways to aggression toward gay men motivated by these other forces (e.g., peer dynamics, thrill seeking, and defensiveness). In addition, the extent to which these risk factors predict aggression toward other sexual minorities awaits future investigation.

Before concluding, it is important to discuss some limitations of the present study. First, the extent to which men’s experience of anger facilitated aggression toward the gay male opponent could not be determined. As previously noted, laboratory-based studies are not ideal for examining the mediational effects of state variables (e.g., anger) on aggressive behavior. Indeed, in the present study, it took several minutes for participants to complete the self-report measure of anger prior to engaging in the aggression task. As a result, high levels of anger that presumably facilitate aggression toward gay men may have dissipated over time. This limitation is tempered by the fact that previous cross-sectional research supports anger in response to gay men as a mediator of the link between sexual prejudice and aggression toward gay men (Parrott & Peterson, 2008). Second, the present sample was comprised of male participants recruited exclusively from an undergraduate population. While the literature, in

general, finds that young men are the most frequent perpetrators of aggression toward gay men (NCAVP, 2007), recent research has found that women's sexual prejudice toward lesbians accounts for the link between traditional female gender role beliefs and anger in response to a lesbian dyad (Parrott & Gallagher, 2008). Thus, these data suggest that women may also be driven to anti-lesbian aggression to enforce traditional gender role norms. Future research is needed to test this hypothesis. In addition, these findings need to be extended to broader adult samples beyond male college students. For example, population-based studies could determine if these effects can be generalized to non-collegiate young men or to adult males in general. If the current results can be confirmed in probability samples, it would provide convincing support for their application in designing community interventions to reduce violence against sexual minorities. Third, the noteworthy magnitude of several non-significant path coefficients (e.g., toughness and physical aggression) suggests that the present investigation may not have possessed sufficient power to detect less than moderate effect sizes. This potential limitation suggests caution when interpreting these effects and provides additional support for the use of larger samples in future research.

In conclusion, this investigation examined the mediating effects of sexual prejudice and masculine gender role stress on the relation between male gender role beliefs and anger and aggression toward gay men. Results demonstrated that adherence to the status norm exerted significant indirect effects on aggression toward gay men and that adherence to the antifemininity norm exerted significant indirect effects on anger in response to gay men and aggression toward gay men. These effects operated primarily through sexual prejudice. Findings of this investigation highlight the importance of taking a multivariate approach in the study of aggression toward sexual minorities. In addition, it is evident that there are numerous motivations for aggression toward sexual minorities that likely converge to cause a given act. Thus, there is a clear need for future research to delineate a multivariate risk profile associated with these different motivations so that we can better predict in whom, and in what circumstances, aggression toward sexual minorities is most likely to occur.

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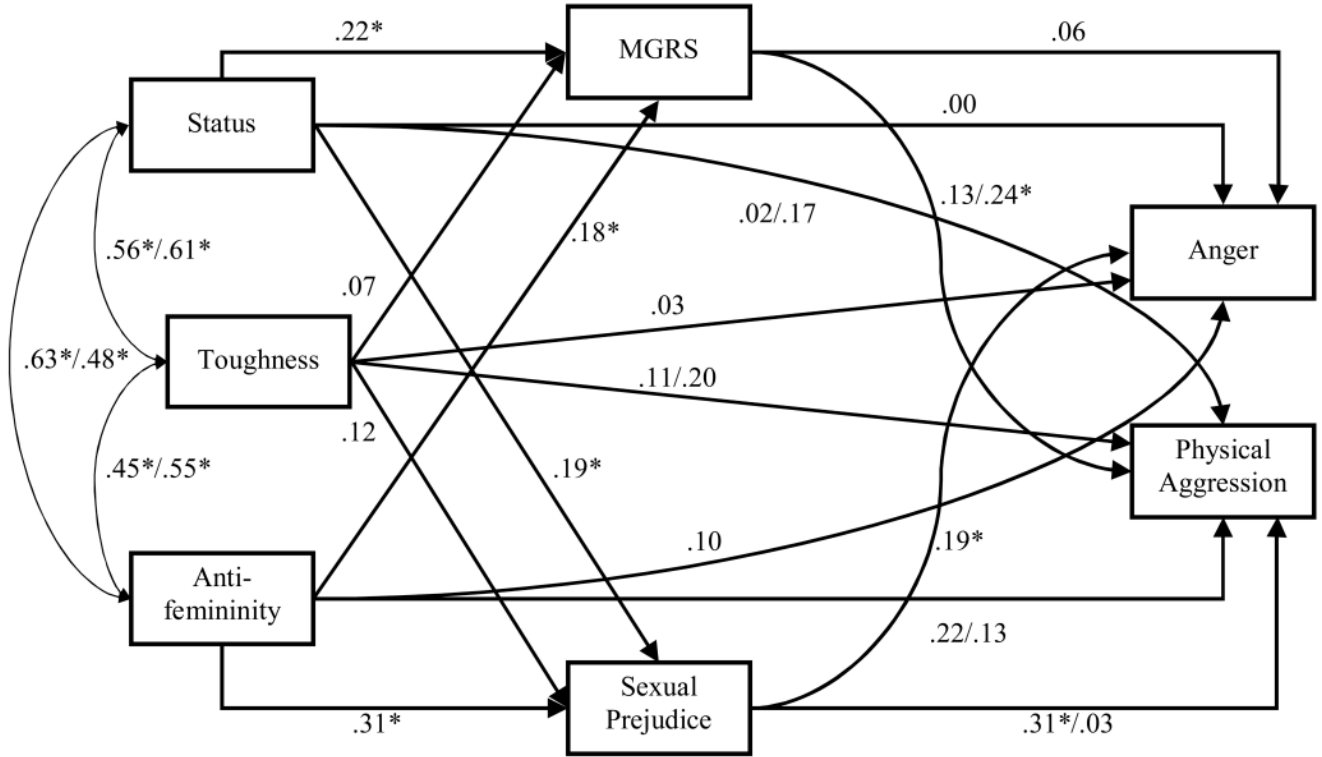


Figure 1. Structural paths depicting effects of status, toughness, and antifemininity on increases in anger and physical aggression toward gay and heterosexual men mediated by sexual prejudice and masculine gender role stress; In structural paths with two coefficients, the first statistic was derived from the gay male opponent group, whereas the second statistic was derived from the heterosexual male opponent group; * $p < .05$.

Table 1
Descriptive Statistics for Predictor Variables by Opponent Sexual Orientation Group

Variable	Gay Male Opponent			Heterosexual Male Opponent		
	<i>M</i>	<i>SD</i>	range	<i>M</i>	<i>SD</i>	range
1. Status	53	11	13–75	54	10	26–74
2. Toughness	36	8	12–56	36	9	16–56
3. Antifemininity	27	8	7–43	27	9	7–46
4. Sexual Prejudice	48	20	10–89	50	22	10–90
5. Masculine Gender Role Stress	118	34	10–180	117	32	13–186
6. Anger Change	2.45	4.6	–5–18	2.77	4.7	–9–20
7. Shock Intensity	4.97	2.2	1–10	5.02	2.0	1–10

Note. *n* = 150; Higher anger change scores indicate an increase in anger from baseline to post-video.

Table 2
Correlations for Predictor Variables by Opponent Sexual Orientation Group

Variable	Correlations						
	1.	2.	3.	4.	5.	6.	7.
1. Status	—	.61*	.48*	.41*	.32*	.30*	.44*
2. Toughness	.58*	—	.51*	.33*	.23*	.27*	.44*
3. Antifemininity	.62*	.48*	—	.46*	.27*	.51*	.39*
4. Sexual Prejudice	.46*	.45*	.49*	—	.36*	.46*	.27*
5. Masculine Gender Role Stress	.39*	.35*	.41*	.35*	—	.31*	.38*
6. Anger Change	.20 [†]	.20 [†]	.12	.52*	.09	—	.26*
7. Shock Intensity	.39*	.38*	.46*	.49*	.36*	.17	—

Note. $n = 150$; Correlation coefficients above the diagonal are for participants who competed against the heterosexual male opponent, correlation coefficients below the diagonal are for participants who competed against the gay male opponent; Higher anger change scores indicate an increase in anger from baseline to post-video

* $p < .05$

[†] $p < .10$.