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Heterosexual Men's Anger in Response to Male Homosexuality: Effects of Erotic and Non-Erotic Depictions of Male-Male Intimacy and Sexual Prejudice

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Abstract

The present study compared effects of erotic and non-erotic depictions of male-male intimacy on the experience of anger in heterosexual men. Data came from three independent laboratory studies designed to elicit anger in response to erotic or non-erotic depictions of male-male and male-female intimacy. All participants completed a measure of sexual prejudice and anger was assessed before and after viewing the erotic or non-erotic video. Among high-prejudiced men, viewing erotic and non-erotic intimate behavior between two men elicited significant increases in anger relative to viewing comparable behavior between a male-female dyad. In contrast, among low-prejudiced men, viewing erotic, but not non-erotic, intimate behavior between two men elicited significant increases in anger relative to viewing comparable behavior between a male-female dyad. Implications for understanding heterosexual men's anger, and aggression, toward gay men were discussed.

Keywords

Anger; Male Homosexuality; Homosexuality (Attitudes Toward); Violence; Ecological Validity

Antigay violence remains a significant public health concern despite increased attention given to this subject in the public domain. While discrimination and aggression against sexual minorities remains commonplace (NCAVP, 2005, 2006), victims of antigay assaults are less likely to report these crimes to law enforcement compared to victims of other bias-motivated attacks (Dunbar, 2006; Herek, Gillis, & Cogan, 1999; NCAVP, 2003). As these attacks become more violent, victims are less willing to report them (Dunbar, 2006). Hence, current prevalence rates likely underestimate the degree to which sexual minorities are at risk for victimization. Moreover, research suggests that sexual minorities suffer a greater severity of violence in comparison to victims of other bias-motivated crimes (Dunbar, 2006) and, similarly, more symptoms of depression, anger, anxiety, and posttraumatic stress in comparison to victims of nonbiased crimes (Herek et al. 1999). Thus, research that investigates determinants of antigay violence could promote public health by informing intervention programs aimed at reducing these types of hate crimes.

The Role of Anger in Antigay Violence

In an extensive review of the antigay aggression literature, Parrott (2008) highlighted the utility of organizing risk factors for antigay aggression within the parsimonious theoretical framework of the General Aggression Model (Anderson & Bushman, 2002). In this model, an aggressive response is determined by inputs, an individual's present internal state, and appraisal processes. Inputs describe features that can be grouped into either personal (i.e., biological, psychological) or situational (i.e., environmental and social) factors. These input variables influence behavior through the activation of associatively linked cognitive, affective, and physiological networks (i.e., present internal state). Appraisals are based upon the relative activation of these routes and, ultimately, inform one's decision to aggress. For example, an individual's experience of anger serves to mediate the causal relation between individual and situational inputs and subsequent aggressive behavior. Thus, individual differences and situational factors can predispose an individual to an amalgam of affective, cognitive, and physiological responses that may lead to aggression. This theoretical framework effectively organizes the investigation of risk factors for antigay aggression. More importantly, it identifies a number of variables in a "chain of events" that are likely to precede an act of antigay aggression.

Theories of antigay aggression have advanced several potential links comprising this chain of events. Sexual prejudice, which reflects "all negative attitudes based on sexual orientation" (Herek, 2000a, p. 19), has been associated with the perpetration of antigay aggression (Franklin, 2000). Theorists contend that sexual prejudice most likely facilitates antigay aggression in men who are exposed to intimate or sexual interactions between two men (Gentry, 1987; Herek, 1988; Kite, 1984; Kite & Whitley, 1996). This supposition is consistent with the view that sexual prejudice and antigay aggression function to enforce gender and societal norms (Franklin, 2004; Harry, 1990; Herek, 2000a; Kimmel, 1997). Indeed, researchers have long pointed out that the male gender role is defined by contrasts and that these contrasts are maintained through the segregation and persecution of women and gay men as the non-masculine "other" (Franklin, 1998, 2000, 2004; Kimmel, 1997, 2000; Kimmel & Mahler, 2003). Heterosexual men may be motivated to enforce this contrast for a number of reasons, including traditional beliefs about marriage and family (Hegarty, Pratto, & Lemieux, 2004), beliefs that gay men are carriers of HIV (Pryor, Reeder, Yeadon, & Hesson-McInnis, 2004), to avoid unwanted sexual advances (Herek, 2000a), and to gain status and avoid emasculation at the hands of their peers (Franklin, 2000; Harry, 1990; Kimmel, 1997). In summary, pertinent theories clearly identify sexual prejudice and exposure to male-male intimate behavior (e.g., kissing, holding hands, fondling, intercourse) as individual and situational risk factors for antigay aggression, respectively, within the framework of the GAM.

Findings from a number of laboratory- and survey-based studies support interactive effects of sexual prejudice and exposure to extreme depictions of male-male intimate behavior on the elicitation of anger. In these studies (Bernat, Calhoun, Adams, & Zeichner, 2001; Parrott, Zeichner, & Hoover, 2006; Parrott & Zeichner, 2005), sexually prejudiced men who were exposed to male-male erotica experienced significantly more anger relative to sexually prejudiced men who viewed male-female erotica. Consistent with these findings, startle eye blink paradigms have shown that sexual prejudice is related to higher startle magnitude (i.e., increased negative affect) in response to pictures of nude men and male-male couples (Mahaffey, Bryan, & Hutchinson, 2005a, 2005b).

Sexual prejudice and exposure to male-male intimate behavior have also been shown to facilitate antigay aggression. For example, numerous survey-based investigations have shown that sexual prejudice is associated with self-reported past aggressive behavior toward gay men (Franklin, 2000; Patel, Long, McCammon, & Wuensch, 1995; Roderick, McCammon, Long, & Allred, 1998). In two laboratory-based studies (Bernat et al., 2001; Parrott & Zeichner, 2005), sexually prejudiced men who viewed male-male erotica displayed higher levels of

aggression toward a gay, relative to a heterosexual, man. However, among men who viewed male-female erotica, no differences in aggression toward gay or heterosexual men were observed (Parrott & Zeichner, 2005).

These findings clearly demonstrate an interactive effect of sexual prejudice and exposure to male-male intimate behavior (i.e., inputs) on both anger (i.e., routes) and antigay aggression (i.e., outcome). However, the GAM proposes that changes in an individual's internal state (e.g., increased anger) elicited by input variables (e.g., sexual prejudice, exposure to male-male intimate behavior) could lead to increased levels of antigay aggression. Tentative support for this mediational hypothesis comes from laboratory as well as survey-based research. Parrott and Zeichner (2005) showed that, among heterosexual men who were exposed to male-male erotica, the experience of anger was positively correlated with aggression against a gay, relative to a heterosexual, male opponent. This effect was not observed among heterosexual men who viewed male-female erotica. In a direct test of this hypothesis, Parrott and Peterson (2008) assessed sexual prejudice, anger in response to a vignette depicting male-male intimate relationship behavior, and self-reported past aggressive behavior toward gay men. Results indicated anger in response to gay men fully mediated the relation between sexual prejudice and the perpetration of antigay aggression.

It is likely that multiple factors influence an individual's decision to act aggressively towards a gay man (Franklin, 1998; Parrott & Peterson, 2008). However, the GAM and the reviewed literature suggest that the elicitation of anger represents one critical component that mediates the relation between inputs (i.e., sexual prejudice, exposure to male-male intimate behavior) and an outcome (i.e., antigay aggression). Indeed, a multitude of research concurs that anger is often an essential precursor to an aggressive response (Cavell & Malcolm, 2007).

Limitation of Ecological Validity

The reviewed literature represents an important step in elucidating important causal pathways that lead to antigay violence. However, laboratory-based studies reviewed above used sexual erotica as an analogue for male-male intimacy. This practice is problematic because these stimuli possess extremely low ecological validity. This limitation is particularly troubling when one considers that laboratory aggression research, including the paradigms and methods employed in this work, have often been the subject of scrutiny and criticism on grounds of weak construct and external validity (Gottfredson, Hirschi, Felson, & Tedeschi, 1993; Ritter & Eslea, 2005; Tedeschi & Quigley, 2000). These critiques have been addressed repeatedly in the aggression literature (e.g., Anderson & Bushman, 1997; Giancola & Chermack, 1998). Nevertheless, the fact that such debate exists highlights the need for researchers to be vigilant and steadfast in their attempts to improve the methodology of laboratory-based research whenever possible.

Therefore, laboratory-based research on antigay aggression would be more generalizable if improvements could be made in terms of external and ecological validity. External validity is a product of similarity of sample, situation, and the degree to which sample characteristics accurately represent the population and setting of interest (Anderson & Bushman, 1997). Ecological validity is conceptualized as a component of external validity that specifically reflects similarity between the participants' experience in laboratory and their experience in natural settings. Indeed, Whitley (2002) asserted that when a natural setting is infeasible, the most ecologically valid laboratory setting is one that mimics the natural setting as closely as possible.

As noted above, pertinent theory (Franklin, 1998, 2000, 2004; Kimmel, 1997, 2000; Kimmel & Mahler, 2003) has highlighted the importance of exposure to male-male intimate behavior as a risk factor for antigay aggression. In accordance with Whitley's (2002) recommendation,

the ecological validity of laboratory-based research would be maximized by using depictions of male-male intimate behavior that mimic what heterosexual men experience in natural settings. Unfortunately, previous research has employed extreme depictions of male-male intimate behavior (i.e., male-male erotica) that do not approximate what heterosexual men typically observe in natural settings. As such, the use of sexually explicit material represents a less than ideal test of these theories, which in their conceptualization of antigay aggression do not rely on sexually explicit examples of male-male intimacy. For example, pertinent literature suggests that heterosexual men must be constantly vigilant for expressions of male-male intimate behavior to avoid emasculation and ostracism at the hands of their peers (Kimmel, 1997). Concerned with maintaining their gender-role adherence, vigilant men are likely to notice male-male intimacy in everyday life (e.g., two men holding hands) but, concurrently, are especially motivated to avoid witnessing explicit sexual behavior inconsistent with the male gender role (e.g., male-male sexual behavior). Taken together, it is highly unlikely that heterosexual men will be commonly exposed to a male-male sexual encounter in the context of their daily lives. Thus, inasmuch as researchers attempt to manipulate exposure to male-male intimate behavior, the use of male-male erotica does not appear to meet established standards of ecological validity.

What, then, are instances of male-male intimacy that are commonly seen? Increasingly in many communities (as well as popular media), it is not uncommon to witness gay men engaged in everyday relationship behaviors (e.g., holding hands, kissing, going on dates, and of recent, civil unions, weddings). As such, the use of stimuli that depict explicit male-male sexual behavior in laboratory research may produce affective, cognitive, and physiological responses that facilitate antigay violence in a contrived manner. To address this limitation, laboratory-based research on antigay aggression may benefit from the use of ecologically valid priming that depicts publicly seen male-male relationship behaviors. This practice would ensure that the results of this research are more generalizable to real-world situations and populations. Generalizability will also be served in the event that ecologically valid stimuli impact affect, cognition, and aggression similarly to effects of sexually explicit stimuli priming.

The Present Research

The aim of this investigation was to compare effects of erotic (i.e., low ecological validity) and non-erotic (i.e., high ecological validity) depictions of male-male intimate behavior on the experience of anger in heterosexual men. Data were analyzed from three independent investigations that assessed sexual prejudice amongst young heterosexual men and examined their affective response (i.e., anger) to sexual (i.e., male-male erotica, male-female erotica) or non-sexual (i.e., male-male relationship behavior, male-female relationship behavior) stimuli. It was hypothesized that exposure to erotic and non-erotic male-male, relative to male-female, intimacy, would produce significant increases in anger amongst men who reported high levels of sexual prejudice. In contrast, exposure to erotic and non-erotic male-male, relative to male-female, intimacy was not expected to produce significant increases in anger among men who reported low levels of sexual prejudice. Finally, a significant positive relation between sexual prejudice and anger was expected among men who viewed erotic and non-erotic depictions of male-male, but not male-female, intimacy. No differences in this relation were expected as a function of the type of male-male intimacy depicted (i.e., erotic, non-erotic).

Method

Overview

The present investigation comprises an analysis of data gathered from three independent studies of heterosexual undergraduate men. These studies were selected for comparison for several important reasons. First, each study assessed sexual prejudice via well validated self-report

questionnaires, exposed participants to a video depicting male-male or male-female intimate interactions, and assessed self-reported anger prior to and immediately following presentation of the video. Second, Studies 1 and 2 were comprised of a racially homogenous sample whereas Study 3 was comprised of a more racially diverse sample. This difference permitted examination of study hypotheses while increasing the diversity of sample populations. Third, the primary difference between the procedures of each study, and hence a critical point of comparison, involved the stimulus videos presented. In Studies 1 and 2, participants were randomly assigned to view a three-minute erotic video depicting explicit sexual behavior between a male-male or male-female dyad. In contrast, participants in Study 3 were randomly assigned to watch a three-minute non-erotic video depicting relationship behavior between a male-male or male-female dyad (see below for description of videos). In summary, the methodological similarities between these studies provided a unique opportunity to compare effects of erotic and non-erotic male-male and male-female intimate interactions on anger in sexually prejudiced and non-prejudiced heterosexual men.

Participants

Participants in Studies 1 and 2 were undergraduate men recruited from the Department of Psychology research participant pool at a large southeastern university. Participants in Study 3 were recruited from the Department of Psychology research participant pool at another large southeastern university. All participants provided informed consent. In Study 1, participants completed all procedures in a single session. In Studies 2 and 3, participants completed self-report questionnaires and viewed a stimulus video in separate testing sessions (i.e., on separate days). Upon completion of each study, all participants were fully debriefed and compensated with partial course credit.

Inclusion criteria required participants to be aged 18-30 and report a heterosexual orientation. Men in this age range were selected because this demographic is generally consistent with typical perpetrators of antigay aggression (Harry, 1990; NCAVP, 2006). A heterosexual orientation was confirmed via responses to the Kinsey Heterosexuality-Homosexuality Rating Scale (KRS; Kinsey, Pomeroy, & Martin, 1948). As recommended by Savin-Williams (2006), sexual orientation is most reliably assessed when multiple components of sexual orientation are congruent. Moreover, it is suggested that the highest priority be given to indices of sexual arousal rather than self-identification and reports of sexual behavior. Indeed, these latter components of sexual orientation 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 women (i.e., no reported sexual arousal to men) and sexual experiences that occurred predominantly with women. Using these criteria, in Study 1 ($n = 187$), five participants did not complete all items on the self-report measures, one participant did not fall within the targeted age range, and 17 participants did not report a heterosexual orientation. In Study 2 ($n = 241$), 60 participants did not return for the second part of the study, one participant did not fall within the targeted age range, and 15 participants did not report a heterosexual orientation. In Study 3 ($n = 412$), 22 participants did not return for the second part of the study, seven participants did not fall within the targeted age range, and 66 participants did not report a heterosexual orientation. Removal of these participants from each respective sample resulted in a final sample of 164, 165, and 317 heterosexual men for Studies 1, 2, and 3, respectively. For demographic information of each subsample, see Table I.

Questionnaire Battery

Demographic form—This self-report form was used to assess age, race, education, self-identified sexual orientation, relationship status, and income level.

Kinsey Heterosexual-Homosexual Rating Scale (KRS; Kinsey, 1948)—The KRS is a 7-point, Likert style scale that assessed sexual orientation along a continuum. Participants were asked to report their behavioral experiences and sexual arousal from “exclusively heterosexual” to “exclusively homosexual.” As noted previously, only participants who endorsed exclusive heterosexual arousal and that “all” or “most” of their behavioral experiences occurred with women were included in the analyses.

Homophobia Questionnaire (HQ; Wright, Adams, & Bernat, 1999)—Studies 1 and 2 used the HQ to assess sexual prejudice. This 25-item Likert-type scale measured the degree to which participants agreed or disagreed with various statements regarding their thoughts, feelings, and behaviors toward gay men. The HQ was deemed an appropriate measure of sexual prejudice because it assesses participants' attitudes toward homosexuality across cognitive, emotional, and behavioral domains (Van de Ven, Bornholt, & Bailey, 1996). Scores range from 0 to 100, with higher scores indicative of higher levels of sexual prejudice. The authors reported an alpha reliability of .94 ($M = 41.40$, $SD = 19.32$) and a 1-week test-retest reliability of .96. In Studies 1 and 2, alpha reliability coefficients of .82 and .81 were obtained, respectively.

Attitudes Towards Gay Men Scale (ATGS; Herek, 1988)—In Study 3, sexual prejudice was assessed with this 10-item Likert scale that measured heterosexuals' attitudes held specifically about gay men. Scores range from 10 (extremely positive attitudes) to 90 (extremely negative attitudes). This scale has high internal consistency ($\alpha = .91$) and has been used extensively in the literature as a measure of sexual prejudice (Herek, 2000b; Herek & Gonzalez-Rivera, 2006). An alpha reliability coefficient of .93 was obtained in the Study 3 sample.

Positive and Negative Affect Schedule-Expanded Form (PANAS-X; Watson & Clark, 1994)—The PANAS-X is a self-report measure that assesses broad dimensions of affect as well as discrete emotions experienced at the present moment. In the three studies reported herein, the Anger-Hostility Scale (AHS) of the PANAS-X was administered in conjunction with the Positive and Negative Affect Scales. These two global measures consisted of 20 mood descriptors that were rated on a 5-point Likert style scale. There were 10 Positive Affect ($\alpha = .88$) and 10 Negative Affect ($\alpha = .85$) items. The AHS consisted of six mood descriptors (e.g., hostile, angry). Participants rated the extent to which they are experiencing each descriptor on a 5-point scale from 1 (*very slightly*) to 5 (*extremely*). The authors reported an internal consistency coefficient of .83. In the three studies reported herein, alpha reliability coefficients for both administrations of the AHS ranged between .76 and .90.

Stimulus Videos

In Studies 1 and 2, participants were randomly assigned to view a 3-min color videotape depicting consensual sexual activity between a male-male or male-female dyad. These videos depicted sexual foreplay (i.e., kissing and undressing), oral-genital contact (i.e., fellatio, cunnilingus), and intercourse (i.e., anal or vaginal penetration). In contrast, participants in Study 3 were randomly assigned to watch a 3-min color video depicting intimate relationship behavior between a male-male or male-female dyad, including partners holding hands, kissing, and participating in marriage ceremonies. With the exception of public displays of affection (e.g., kissing), the stimuli in Study 3 did *not* depict any explicit sexual contact.

Procedure

Study 1—Participants were greeted by an experimenter and led to an experimental room. After obtaining informed consent, the experimenter notified participants that the purpose of the study was to assess the effect of sexually explicit material on word recognition. Next, participants completed a questionnaire battery that included the demographic form, KRS, HQ,

and PANAS. Instructions for word recognition task (not relevant to the aims of this study) were given and the participant completed practice trials (for additional information about this study, see Parrott et al., 2006). Participants then viewed a video depicting explicit sexual activity between a male-male or male-female dyad and completed the PANAS a second time.

Study 2—Participants presented to the laboratory on two separate days. In the first session, informed consent was obtained and participants were asked to complete a questionnaire battery that included the demographic form, KRS and HQ. All participants were asked to return to the laboratory for a second session within two weeks. Upon arrival to the laboratory for the second session, informed consent was obtained and participants were informed that the experiment was designed to examine the effect of sexually explicit material on reaction time. Participants were escorted to an experimental room where the procedures for the study were described (for additional information about this study's procedures, see Parrott & Zeichner, 2005). The PANAS was also completed at this time. Participants then viewed a video depicting explicit sexual activity between a male-male or male-female dyad and completed the PANAS a second time.

Study 3—Participants came to the laboratory on two separate days. In the first session, informed consent was obtained and participants were asked to complete a questionnaire battery that included the demographic form, KRS and ATGS. All participants were asked to return to the laboratory for a second session within two weeks. Upon arrival to the laboratory for the second session, participants provided informed consent, were told that the purpose of the study was to examine the effects of relationship behavior on reaction time, and completed the PANAS. Participants were escorted to an experimental room where the procedures for the study were described. Participants then viewed a video depicting intimate relationship behavior between a male-male or male-female dyad and completed the PANAS a second time.

Results

Effects of Erotic and Non-Erotic Male-Male Intimacy on Anger in Sexually Prejudiced and Non-Prejudiced Men

It was expected that exposure to male-male, relative to male-female, intimacy would produce large increases in anger amongst men who reported high, but not low, levels of sexual prejudice regardless of erotic content. This hypothesis was examined by calculating an effect size estimate that compared the anger response of individuals who viewed male-male interactions with the anger response of those who viewed male-female interactions. Our term for this comparison was the male-male intimacy effect size, and it was computed separately for low- and high-prejudiced men who viewed either erotic or non-erotic interactions. Low- and high-prejudiced men were delimited by their report of sexual prejudice scores that fell within the lower and upper quartiles, respectively, of their respective samples. The lower and upper cutoffs for the HQ in Studies 1 and 2 were 31 and 49, ($M = 40.70$, $SD = 12.72$) and 36 and 52 ($M = 42.77$, $SD = 12.57$), respectively. The lower and upper cutoffs for the ATGS were 30 and 66, for Study 3 ($M = 48.23$, $SD = 22.23$). Because Studies 1 and 2 utilized sexual erotica, it was necessary to weight the effect size of each study by its sample size (Hedges & Olkin, 1985). This procedure assigned greater weight to studies with larger sample sizes on the assumption that their effect sizes were more precise. Ninety-five percent confidence intervals (CI) were computed for each effect size within each subgroup: low-prejudiced men who viewed sexual erotica, high-prejudiced men who viewed sexual erotica, low-prejudiced men who viewed non-erotic interactions, high-prejudiced men who viewed non-erotic interactions.

Results indicated that, for low-prejudiced men, the mean male-male intimacy effect size in response to sexual erotica was large and statistically significant ($d = 1.26$, 95% CI: 0.85-1.66).

This indicated that low prejudiced men who viewed male-male erotica reported higher levels of anger than their counterparts who viewed male-female erotica. In contrast, the mean male-male intimacy effect size in response to non-erotic relationship activity was small and not statistically different from zero ($d = 0.05$, 95% *CI*: -0.39-0.50). Thus, among low-prejudiced men, viewing erotic, but not non-erotic, intimate behavior between two men elicited significant increases in anger relative to viewing comparable behavior between a male-female dyad.

For high-prejudiced men, the mean male-male intimacy effect size in response to sexual erotica was large and statistically significant ($d = 2.50$, 95% *CI*: 2.13-2.86). This indicated that high-prejudiced men who viewed male-male erotica reported higher levels of anger than their counterparts who viewed male-female erotica. Similarly, the mean male-male intimacy effect size in response to non-erotic relationship activity was large and statistically significant ($d = 1.31$, 95% *CI*: 0.91-1.72). Thus, among high-prejudiced men, viewing erotic and non-erotic intimate behavior between two men elicited significant increases in anger relative to viewing comparable behavior between a male-female dyad.

Relation Between Sexual Prejudice and Anger in Response to Erotic and Non-Erotic Depictions of Male-Male and Male-Female Intimacy

Although the previous analyses allowed for an examination of effect sizes, it was not possible to statistically compare correlations between sexual prejudice and anger in response to the erotic and non-erotic depictions of male-male or male-female intimacy presented in each study. Moreover, these analyses required the artificial dichotomization of sexual prejudice, a practice which engenders numerous negative consequences including the loss of information about individual differences and reduced effect sizes (MacCallum, Zhang, Preacher, & Rucker, 2002). As such, Pearson product-moment coefficients were computed between sexual prejudice and changes in anger in response to erotic and non-erotic intimacy between male-male and male-female dyads.

Results indicated a significant positive correlation between sexual prejudice and anger increase after viewing erotic ($r = .37$, $p < .001$) and non-erotic ($r = .46$, $p < .001$) depictions of male-male intimacy. A Fisher's test conducted to compare these coefficients did not detect a significant difference between these associations. Results failed to detect a significant relation between sexual prejudice and change in anger after viewing erotic and non-erotic depictions of male-female intimacy. Taken together, these findings indicated that sexual prejudice predicted increases in anger in response to male-male, but not male-female, intimacy and that this relation did not differ significantly as a function of the type of male-male intimacy depicted (i.e., erotic, non-erotic).

Discussion

The present investigation sought to examine self-reported anger to viewing erotic and non-erotic male-male intimate behavior, relative to erotic and non-erotic male-female intimate behavior, among low- and high-prejudiced men. It was hypothesized that erotic and non-erotic depictions of male-male intimacy would elicit large increases in anger amongst men who reported high, but not low, levels of sexual prejudice. Results partially supported this hypothesis.

Stimulus videos that depicted erotic and non-erotic male-male intimacy elicited similar increases in anger amongst sexually prejudiced men. In addition, the positive association between sexual prejudice and anger in response to male-male intimacy did not significantly differ as a function of the type of stimulus video participants viewed. These findings are consistent with past research which has demonstrated effects of sexual prejudice and exposure to male-male intimate behavior on elicitation of anger (Bernat et al., 2001; Parrott & Zeichner,

2005). These findings are also in line with survey-based research that has demonstrated the utility of ecologically valid depictions of male-male intimate behavior in producing changes in affect amongst sexually prejudiced men (Parrott & Peterson, 2008).

Unexpected was the finding that the erotic videos depicting male-male intimacy elicited anger even amongst participants who reported low levels of sexual prejudice ($d = 1.26$), although to a lesser degree than their counterparts who endorsed higher levels of sexual prejudice ($d = 2.50$). This finding is inconsistent with theoretical conceptualizations of men's affective responses to male-male intimate behavior (Herek, 2000a; Kimmel, 1997), which posits that anger in response to homosexuality stems from prejudice. Thus, non-prejudiced men's self-reported anger may be related other factors, such as the taboo nature of viewing male-male pornographic material. In contrast, and consistent with the view that anger in response to homosexuality stems from prejudice, depiction of non-erotic male-male relationship behavior elicited anger among sexually prejudiced men but not among non-sexually prejudiced men.

The implications of these findings are twofold. First, the fact that a more ecologically valid stimulus video elicited similar increases in anger among sexually prejudiced men enhances the generalizability of previous studies that have employed arguably less ecologically valid (i.e., erotic) depictions of male-male intimate behavior. As such, the present findings strengthen the view that sexual prejudice and exposure to male-male intimate behavior are important variables that activate an anger based pathway towards antigay aggression (Parrott & Peterson, 2008). However, the GAM stipulates that other components of a perpetrator's internal state (e.g., cognition and arousal) are also important mediators of an individual's ultimate decision to aggress. Whether sexual prejudice and exposure to ecologically valid depictions of male-male intimate behavior would also produce changes in cognition and arousal and, ultimately, the extent to which these changes lead to an aggressive outcome awaits further examination.

Second, the results of the current investigation support the use of ecologically valid depictions of male-male intimate behavior in future research on antigay violence. Thus, the use of erotic stimuli in future research may limit data interpretation. Indeed, it may be difficult to parse the extent to which men are angered by exposure to graphic pornographic materials *or* by male-male intimacy. To minimize this problem, future research on antigay violence may benefit from the use of non-erotic, ecologically valid depictions of male-male intimacy. In addition to non-erotic videos used in the present research, other stimuli may also be envisioned, such as those that use imagined (i.e., the use of scripts) or in-vivo exposures (i.e., the use of confederates).

The finding that sexually prejudiced men reported comparably large increases in anger regardless of the type of male-male stimulus video used (i.e., sexual, non-sexual) has interesting but unclear theoretical implications. Men appear to be angered by witnessing male-male sexual activity regardless of their level of sexual prejudice, but only those who report high levels of sexual prejudice are angered by non-erotic male-male relationship behavior. Perhaps men who report high levels of sexual prejudice imagine sexual contact between two male partners when they witness them involved in common and publicly seen relationship behaviors. This speculation would be in keeping with previous research on sexually prejudiced men's experience of sexual arousal in response to male homosexuality (Adams, Wright, & Lohr, 1996). Additionally, such cognitions may reflect a lack of exposure to gay men and are in line with stereotypes of gay men as being hypersexual (Herek, in press). Future research is needed to explore this possibility.

Several limitations in the current study merit consideration. First, it is noteworthy that two different self-report measures of sexual prejudice were used in our studies. However, the fact that analyses of the three samples yielded a similar pattern of results (e.g., effect sizes and

correlations) indicated that the two measures were tapping into the same construct (i.e., sexual prejudice). Second, while demographic characteristics of the three samples were similar in regard to age, education level, and income, one sample was comprised of a larger minority representation. While increasing the diversity of sample populations was generally preferred, additional research is needed to determine the extent to which these demographic variables may account for differences among variables of interest. Third, this research relied on self-report data collected with explicit measures of sexual prejudice and anger. Future research is needed to rule out potential effects of social desirability by using implicit measures of prejudice, such as the implicit association test (Greenwald, McGhee, & Schwartz, 1998), and affect/arousal measures that are less susceptible to response bias (e.g., facial coding, facial EMG, skin conductance). Use of such assessment strategies will deepen our theoretical understanding of the processes associated with antigay discrimination and violence. Finally, the present study's reliance on an undergraduate population may have limited the generalizability of these findings. Although young males are the most common perpetrators of aggression toward gay men (NCAVP, 2006), these findings need to be extended to broader adult samples beyond male college students.

Despite these limitations, the present study demonstrated the importance of sexual prejudice, exposure to ecologically valid depictions of male-male intimate behavior, and anger in our understanding of antigay violence. In addition, it further promoted the use of the GAM in informing research on antigay violence. Perhaps most importantly, these data indicated that researchers should employ ecologically valid examples of male-male intimacy and must continue to strive to develop paradigms that are more consistent with theory and real world experiences.

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Table 1

Demographic Information

Variable	Study 1		Study 2		Study 3	
	M	SD	M	SD	M	SD
Age	19.7	1.3	19.6	1.6	19.9	2.4
Education level (years)	14.8	1.3	14.6	1.4	14.2	1.6
Family yearly income	\$55,813	\$23,234	\$57,218	\$26,635	\$39,208	\$28,888
Race (%)						
White, non-Hispanic	85		84		44	
African American	6		7		28	
Asian American	7		6		18	
Other	2		3		10	
Relationship status (%)						
Single, never married	99		98		97	
Married	0		2		2	
Divorced	1				1	