ABSTRACT

Title of thesis: 'Butch Up' or 'Sissy That Walk'?
Testing the Potential of Gender Affirmations to Moderate
Masculinity Threat in Gay Men

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There is evidence to suggest heterosexual men respond to threats to their masculinity in a number of deleterious ways, but few studies have examined this relationship in sexual minority men. For this reason, the present study sought to investigate the effects of an experimentally manipulated masculinity threat on the moods, internalized heterosexism, and self-esteem of gay men, while exploring the potential for gender affirmation exercises to moderate such effects. A sample of 129 gay men were recruited and asked to engage in either a gender affirmation or control writing task, after which they were either exposed to a masculinity threat or control. Findings across conditions were nonsignificant for each of the outcome measures regardless of writing task or threat exposure. Findings were similarly nonsignificant for the interaction between these variables. These findings further complicate the limited and often inconsistent literature on gay men and masculinity.

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TESTING THE POTENTIAL OF GENDER AFFIRMATIONS TO MODERATE
MASCULINITY THREAT IN GAY MEN

by

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Introduction

The extent to which gender organizes and informs our lives has received no shortage of attention in the counseling psychology literature, with constructs and frameworks from which to study it often at the forefront of research and practice. One such construct is that of precarious masculinity, or the notion that manhood is defined by social proof rather than an inherent and inalienable birthright of men (Vandello, Bosson, Cohen, Burnaford, & Weaver, 2008). Literature on the precarious and performative nature of masculinity has seen a recent increase in empirical investigations (e.g., Bosson, Vandello, Burnaford, Weaver, & Wasti, 2009; Vandello, Bosson, Cohen, Burnaford, & Weaver, 2008), and examinations have begun to detail the numerous deleterious effects of precarious masculinity on men and those around them. Little research, however, has mapped this and similar constructs onto the experiences of gay men. The extent to which findings regarding gendered experiences drawn from samples of heterosexual men generalize to gay men remains uncertain.

More generally, little work has examined how gay men relate to masculinity and the resulting effects of this relationship. Societal ideals of masculinity have been defined as orthogonal to femininity and as necessarily heterosexual. Therefore, homosexuality has been defined as necessarily feminine and incompatible with ideals of masculinity. Though the implications of this conflict between the sexual and gender identities of gay men remain unclear, it is reasonable to anticipate that such a conflict will impact gay men in meaningful and likely detrimental ways. Nonetheless, key findings suggest that masculinity remains an important organizing element of the identities of gay men, with broad implications for mental health outcomes (e.g., Szymanski & Carr, 2008).

A primary goal of this research was therefore to examine the extent to which gay masculinity is receptive to masculinity threat. Using a sample composed of gay men and an established masculinity threat paradigm (e.g., Hunt, Fasoli, Garnaghi, & Cadinu, 2016; Hunt & Gonsalkorale, 2014; Hunt, Gonsalkorale, & Murray, 2013), I examined the effect of masculinity threat on positive and negative affect, self-esteem, and internalized heterosexism in gay men. Additionally, little research has empirically addressed how best to resolve or prevent the well-documented effects that arise in response to threats to masculinity (see O'Neil, 2008 for a review of the gender role conflict literature and researched interventions). For this reason, I also tested the potential for masculinity and femininity gender affirmation exercises to moderate the potentially harmful effects of masculinity threat on affect, self-esteem, and internalized heterosexism.

The following literature review begins by examining how masculinity has been conceptualized in the academic literature and how gay men relate to it. Next, the review examines the extent to which general conceptualizations of masculinity appropriately reflect those experiences of gay men and the emerging literature examining gay men and masculinities. I additionally examine a few of the many well-documented effects of masculinity consciousness on gay men's well-being, interpersonal and romantic relationships, and experiences of internalized heterosexism, as well as the uniquely ambivalent relationship many gay men have with masculine ideals. Finally, this literature review addresses the limited theoretical and empirical findings addressing interventions for resolving issues of masculinity threat.

Literature Review

Gender Identity Development and Adjustment

As with many social identities, conceptualizations of gender generally fall into one of two camps: the essentialist and social constructionist perspectives. The former implies "a belief that certain phenomenon are natural, inevitable, universal, and *biologically determined* [emphasis added]*"* (DeLamater & Hyde, 1998, p. 10). In contrast, the social constructionist perspective argues that (a) gender is socially constructed and therefore varies across cultures, times, and geographic locations, and that (b) gender is dynamic, defined not solely by biological markers but also fluctuating standards of identity, behavior, and attitudes (Parent, DeBlaere, & Moradi, 2013). This social constructionist perspective offers a perspective of gender as both subject to social evaluation and malleable, and for this reason lends itself more readily to this research project.

Within the social constructionist conceptualization of gender, hegemonic masculinity has been defined as the "most honored way of being a man," such that all men evaluate themselves relative to it (Connell & Messerschmidt, 2005). Hegemonic masculinity suggests both that masculinity is necessarily aspirational (rather than an inalienable aspect of male identity) and socially constructed. Though only a minority of men will ever embody hegemonic ideals of masculinity (measured by others' evaluations of their masculinity), the vast majority of men nonetheless continue to endorse such values as desirable and seek to personify them in their own mannerisms, appearances, and reflexive social identities. Hegemonic masculinity remains a guiding albeit elusive force in many men's lives and is reinforced societally through reward (e.g., access to both material and social resources) and punishment (e.g., experiences of discrimination and bullying among gender nonconforming men).

Gender theorists have long considered the male gender role and quest for hegemonic masculinity problematic (e.g., Eisler & Skidmore, 1987; Harrison, 1978; O'Neil, Helms, Gable,

David, & Wrightsman, 1986; Pleck, 1976). This quest rests in-part on the assumptions that masculinity is desirable, femininity exists antithetically to masculinity, and men must therefore strive to enhance their masculinity and otherwise disavow feminine parts of themselves (O'Neil, Helms, Gable, David & Wrightsman, 1986). In her now seminal piece on androgyny and the development of the Bem Sex-Role Inventory, Bem (1974) first argued against this dichotomization of masculinity-femininity as opposite ends of a single personality variable, and instead began making a case for psychological androgyny rather than sex-type congruence as indicative of psychological well-being. Noting the otherwise restrictive nature of rigid adherence to gendered self-schemas, Bem argued that "whereas a narrowly masculine self-concept might inhibit behaviors that are stereotyped as feminine, and a narrowly feminine self-concept might inhibit behaviors that are stereotyped as masculine, a mixed, or *androgynous*, self-concept might allow an individual to freely engage in both 'masculine' and 'feminine' behaviors [emphasis added]" (p. 155). Bem conceptualized masculinity and femininity as two separate though related personality variables, such that an individual could be high on both, low on both, or have some mixed expression of the two. Her conceptualization resulted in four sex roles defined by the degree of masculine or feminine traits endorsed by an individual's self-ratings, with individuals high in masculinity and low in femininity defined as masculine, individuals low in masculinity and high in femininity defined as feminine, and individuals high in both or low in both defined as androgynous and undifferentiated, respectively (Bem, 1977). From the beginning, Bem saw androgyny as the most desirable of the four sex roles, characteristic of psychologically flexible and healthy persons.

This initial conceptualization sparked a line of research testing Bem's so-called "androgyny hypothesis" and other competing models. For example, Bem and Lenney (1976)

found that when given the choice to be photographed engaging in one of two paired-activities, sex-typed individuals (i.e., feminine women and masculine men) were more likely to choose the activity consistent with expectations for their sex. When asked to engage in cross-sex behaviors while being photographed, these sex-typed individuals experienced greater psychological discomfort and endorsed more negative feelings about themselves than their androgynous counterparts. Bem and Lenney (1976) concluded, "[I]t seems clear that sex typing does restrict one's behavior in unnecessary and perhaps even dysfunctional ways" (p. 53). This notion of psychological restrictiveness became the lynchpin of the androgyny hypothesis.

Though Bem and colleagues articulated limited empirical support for the androgyny hypothesis, other competing models emerged to challenge its theoretical limitations. For example, a meta-analysis by Whitley (1983) of 35 published studies of sex role orientation and self-esteem tested three competing hypotheses: the congruence model, which proposes that masculine men and feminine women consistent with sex-role expectations have the highest self-esteem (a proxy measure of psychological adjustment); the androgyny hypothesis, which proposes that individuals high in both masculinity and femininity have the highest self-esteem; and the masculinity hypothesis, which proposes that high levels of masculinity are most predictive of high self-esteem regardless of sex. Whitley's analysis provided no support for the congruence model, and found positive correlations for masculinity and femininity with self-esteem, as well as a significant interactive effect for both. That being said, the effect sizes for femininity and the masculinity-femininity interaction accounted for only 3% and 1% of the self-esteem variance in the overall sample, respectively. Masculinity accounted for as much as 27% of the variance. Whitley notes that though this provides marginal support for the androgyny hypothesis, it more strongly supports an association between masculinity and self-esteem.

A similar investigation by Orlofsky and O'Heron (1987) compared these competing hypotheses with a more refined conceptualization of sex-type, which they delineated into three measures: (a) sex role personality traits, (b) sex role behaviors, and (c) sex role attitudes. They compared the effects of each on self-esteem and social adjustment, and further divided the androgyny hypothesis into additive androgyny and interactive androgyny hypotheses. The additive androgyny hypothesis suggests that people who are both high in masculinity and femininity might benefit from each in an additive way. For example, androgynous persons might benefit by being able to be assertive in certain situations in which highly feminine persons might be submissive and by being submissive in certain situations in which highly masculine persons might be assertive. In this way, androgynous persons would have access to the resources of both highly masculine and highly feminine persons, and therefore exhibit greater psychological adjustment and higher self-esteem. The interactive androgyny hypothesis similarly suggests that androgynous persons are more psychologically adjusted than their sex-typed counterparts, with the additional implication that androgynous persons reap psychological rewards *over and above* those of highly masculine and highly feminine persons added together. From the perspective of this hypothesis, androgyny would not simply be the flexible employment of masculine and feminine psychological resources, but a unique resource of its own. Consistent with previous findings, Orlofsky and O'Heron (1987) found no support for the congruency hypothesis, marginal support for the additive androgyny hypothesis (rather than the interactive androgyny hypothesis), and consistent support for the masculinity hypothesis. For most measures of self-esteem and social adjustment, both masculinity and femininity uniquely predicted adjustment, though masculinity was more strongly associated with self-esteem on most measures (with the exception of a measure of expressive sociability self-esteem). A follow-up study by O'Heron and

Orlofsky (1990) further examined this relationship. As before, O'Heron and Orlofsky found support for the masculinity and additive androgyny hypotheses. However, men in this study low in masculinity were less adjusted on measures of depression, anxiety, and social adjustment and had less secure gender identities. The authors suggested that though androgyny may not be necessarily detrimental to well-being, a lack of masculinity in men may be (note: no parallel findings were found for women).

Other lines of research have examined the competing congruency, androgyny (both additive and interactive), and masculinity hypotheses across a variety of outcome variables and have provided additional support for the androgyny hypothesis. For example, Guastello and Guastello (2003) demonstrated support for the additive androgyny hypothesis (though not the interactive androgyny hypothesis) when examining scores of emotional intelligence among male and female students and their parents. Lefkowitz and Zeldow (2006) found further support for the additive androgyny (but not the interactive androgyny) hypothesis, with positive masculine and feminine traits positively associated with an "observer-by-proxy" measure of optimal mental health. Support for the additive androgyny hypothesis has also been demonstrated in Chinese samples, where androgyny has been found to support more astute deployment of situation-specific coping strategies (Cheng, 2005), and Indian samples, where androgyny has been associated with more positive psychological outcomes (Prakash, Kotwal, Ryali, Srivastava, Bhat, & Shashikumar, 2010).

Marsh (1987) offered a more refined model of masculinity-femininity self-conceptualization and proposed the differentiated additive androgyny model to better explain some of the previously described inconsistencies. Unlike the aforementioned congruence, androgyny, and masculinity models, this model describes a multi-dimensional model of self-

concept, such that masculinity will be more strongly related to areas of self-concept theoretically considered more masculine, and femininity more strongly related to areas of self-concept theoretically considered more feminine, regardless of an individual's sex. Marsh (1987) provided preliminary evidence in support of this hypothesis. A follow-up study by Marsh and Byrne (1991) further tested this model against the congruence, masculinity, and additive and interactive androgyny models in a series of two studies of multi-dimensional measures of self-concept across five age groups (898 undergraduate students and 1,858 grade school students ages 12-17). Consistent with previous examinations, the researchers found no support for the congruence and interactive androgyny models and only weak support for the additive androgyny model and possibly the masculinity model. Instead, these studies provided strong support for the differentiated additive androgyny model, suggesting that masculinity and femininity influence positive self-concept to varying degrees depending on the dimension of self-concept being measured. This model suggests that the varying and often conflictual findings regarding the androgyny and masculinity hypotheses may not be due to either model being necessarily superior, but instead methodological inconsistencies regarding measures of self-concept and well-being.

Though at times mixed, these findings consistently suggest that simple congruence between one's gender and assumed sex-type is a poor predictor of self-esteem and psychological adjustment. Thus, androgynous persons appear psychologically as well as their exclusively masculine counterparts (regardless of sex), with small gains above and beyond them in limited domains (e.g., androgynous men may have higher scores on a measure of expressive sociability than their exclusively masculine counterparts). As the differentiated additive androgyny model would suggest, androgynous individuals will likely score as well as their masculine counterparts

on global measures that include both feminine and masculine components of psychological adjustment, and likely perform better on measures specific to theoretically feminine components of psychological adjustment (Marsh, 1987). Consistent with Bem's (1974) original hypothesis, androgyny may in fact support psychological flexibility and greater psychological adjustment than scoring high on only one or neither of the masculinity-femininity personality variables.

It is worth noting that the previously summarized research regarding these competing models was performed using samples not specifically LGB, calling into question the generalizability of such findings and the predictive value of such theories in regards to LGB populations. The question whether experiences of gay men and their relationship to masculinity parallel those of heterosexual men itself has seen only a recent increase in attention. Szymanski and Carr (2008) noted that most investigations of masculine gender role socialization have focused exclusively on heterosexual men, and that most examinations of mental health issues among gay men have failed to examine the influence of gender role conflict they may experience. Sánchez, Greenberg, Liu, and Vilain (2009) similarly noted a dearth of published studies examining the intersection of gay and masculine identity. Though gay men are commonly perceived as more feminine and less masculine than their heterosexual counterparts, research regarding gay men's masculine consciousness and anti-effeminacy attitudes suggest that this androgyny is not without conflict (e.g., Sánchez, Greenberg, Liu, & Vilain, 2009). It is therefore unclear to what extent masculinity, femininity, or androgyny predict psychological adjustment in gay men. The following section therefore reviews that literature which has sought to explore how gay men come to know themselves as men and their relationship to masculinity, as well as implications of these findings on the present study.

Gay men. The ways in which gay men come to know and relate to their gender may sometimes differ in significant ways from the experiences of their heterosexual counterparts. This process begins in childhood, with childhood gender nonconformity a well-established and frequent experience among gay men. A meta-analysis by Bailey and Zucker (1995) consolidated findings from 48 studies of gender nonconformity in gay men and detailed a significant and robust relationship between recalled cross-gender behavior in childhood and homosexuality in men. Such nonconformity is regularly policed by society, such that boys displaying cross-sex-typed behaviors are socialized to be less feminine in a process termed defeminization (Whitman, 1977). Harry (1983) mapped the trajectory of this process in adult gay men, who reported significantly fewer cross-gender behaviors in adulthood than in their childhood. Notably, heterosexual men in this study recalled significantly fewer childhood cross-gender behaviors in general and no such process of defeminization, suggesting this process is largely unique to gay men. Though cross-sectional, the findings of this study suggest that gay men who successfully defeminize into adulthood and endorse lower rates of conformity to what Harry referred to as cultural femininity (i.e., gender role adherence) have higher self-esteem than their more effeminate counterparts. That being said, Harry also noted a significant positive association between psychological femininity (e.g., believing that oneself is warm or compassionate) and self-esteem. Though Harry (1983) does not provide a robust explanation for the counter-directional relationships of cultural and psychological femininity with self-esteem, framing this distinction as that of performing femininity versus utilizing it as a psychoemotional resource may clarify this relationship. That is to say, performing femininity through gender roles and behaviors may result in backlash for gay men (Levy, Taylor, & Gelman, 1995), while psychological

femininity may afford gay men greater cognitive flexibility and less strict adherence to gendered schemas that may reduce their self-esteem (Bem, 1974).

Though such findings suggest gender nonconformity is often eliminated through gender socialization in adolescence, empirical investigations suggest that the maintenance of masculinity in adulthood may continue to burden gay men, both psychologically and interpersonally. For example, many gay men report large disparities between their real and ideal level of masculine behaviors and appearances. Sánchez and Vilain (2012) explored this issue empirically through an online assessment of gay men's attitudes toward masculinity and femininity in their self-evaluations and evaluations of partners. As hypothesized, results indicated that around one-half to two-thirds of participants rated masculine appearances and behaviors as important in themselves and partners. Gay men also rated themselves as less masculine and more feminine than they ideally would like to be, both in terms of appearances and behaviors. Taken together, these findings evidence what the authors refer to as a masculine consciousness or saliency of masculinity and anti-effeminacy in many gay men's self-evaluations and evaluations of partners. This masculinity consciousness and related anti-effeminacy attitudes were regressed on a measure of negative gay identity and accounted for 30% of the resulting variance, with masculinity consciousness emerging as the strongest of the two predictors of negative gay identity. These findings suggest that masculine consciousness and a preoccupation with managing one's own masculinity may have negative implications for gay men's evaluations of their gay identity.

Taywaditep (2001), in a seminal publication on the topic, suggested that gay men's masculinity consciousness and concerns regarding their need to maintain masculine appearances may account for the anti-effeminacy attitudes well-documented anecdotally and qualitatively

among gay men. Exploring the ways in which feminine gay men have been and become "marginalized among the marginalized," Taywaditep detailed a long cultural history of gay men seeking assimilation with their heterosexual counterparts that began in the 1910s and 20s with the distinction of "queers" (which at the time did not have an effeminate connotation) from the more derogatory "fairies," "faggots," and "queens." Taywaditep noted that this was largely in reaction to prevailing stereotypes at the time of gay men as effeminate (which arguably remain pervasive today). This sociohistorical analysis of the emergent "macho" gay and his anti-effeminacy attitudes proves informative. It seems imperative therefore that researchers and clinicians further delineate the ways in which masculinity consciousness and anti-effeminacy affect gay men, and begin to offer them alternative ways of relating to their gender identities. A review of the reported effects of masculinity in men generally and gay men specifically follows.

Reported Effects of Masculinity in Men

It remains unclear to what extent androgyny is uniquely predictive of psychological adjustment compared to exclusive masculinity, though there is little debate regarding the potential for unfettered masculinity to have negative physical, psychological, and interpersonal repercussions for men. Harrison (1978) warned that the male sex role may be dangerous to men's health, and many empirical investigations and reviews have since supported his concern. For example, Courtenay (2000) noted that "[m]en in America suffer more severe chronic conditions than women, they die more than six years younger, and they have higher death rates for all 15 leading causes of death" (p. 108). Many health researchers had once cast these findings as an inevitable fact of the male condition. In an effort to dispute this, Courtenay reviewed over 30 behavioral differences between men and women implicated in the observed differentials in their wellness and longevity. For example, he noted that men visit physicians less often, have fewer

dental check-ups, utilize outpatient mental health services less frequently, and altogether seek screenings for a host of health issues such as hypertension and high cholesterol less often than their female counterparts. When diagnosed with major health issues, men are less likely to continue caring for themselves, as when men diagnosed with hypertension are less likely to manage its risk by reducing salt intake, exercising, or losing weight. Men maintain poorer diets, are more likely to use tobacco products and to consume alcohol, and altogether engage in riskier and more physically dangerous behaviors than their female counterparts. Courtenay also commented on men's more limited social networks, their fewer and less intimate friendships, and their lesser likelihood to seek social support when in-need and the narrower support networks from which they draw support. Courtenay contends that the predictive value of biological differences between the sexes when compared to behavioral differences is "comparatively small" (p. 82) and that "[m]asculinity may be an important mediating factor in the co-occurrence of multiple health risk behaviors" (p. 110). Similarly, a more recent examination by Levant and Wimer (2014) sought to replicate findings from a previous study (Levant, Wimer, & Williams, 2011) that associated masculinity with a number of health outcomes. Of the 14 results replicated between the two studies, 10 of the findings implicated masculinity as a risk variable for poorer health behaviors.

These findings are not specific to gay men and therefore may not accurately represent them. It should be noted first that rarely are findings regarding gay men's evaluations of their masculinity compared to that of their heterosexual counterparts. In many regards, this makes logical and ideological sense, since (a) it would be inappropriate to consider heterosexual men as some norm against which to compare their sexual minority counterparts, and (b) many issues of masculinity may be specific to gay men (e.g., preferences for masculinity in partners, evaluations

of gay identity, etc.). That being said, the few studies comparing heterosexual and gay men's attitudes toward masculinity offer preliminary evidence that gay men endorse norms of masculinity less frequently, experience less gender role conflict or the "restriction, devaluation, or violation of others or self" resulting from violating cultural norms about what it means to be a man (O' Neil, 2008, p. 362), and may in fact be more willing to seek help and therefore have better mental health outcomes than their heterosexual counterparts (Lippa, 2008; Naranjo, 2001; Sánchez, Bocklandt, & Vilain, 2013; Shepard, 2001). These findings need to be highlighted to provide counterpoint to narratives of gay men's masculinity that are exclusively deficit-oriented.

That being said, there are a number of reported issues of masculinity on gay men's health and wellness outcomes that are troubling. Researchers have examined the ways in which rigid adherence to masculine norms and experiences of gender role conflict affect gay men's health behaviors (Hamilton & Mahalik, 2009) and increase their risk for health issues such as body image concerns and eating pathology (e.g., Blashill & Vander Wal, 2009; Kimmel & Mahalik, 2005), substance abuse issues (e.g., Panchankis, Westmaas, & Doughtery, 2011; Hamilton & Mahalik, 2009), and behaviors that increase the potential for exposure to HIV and other STIs (e.g., Parent, Torrey, & Michaels, 2012). Gender role conflict in gay men has also been positively associated with experiences of psychological distress and negatively associated with willingness to seek professional psychological help among gay men (Simonsen, Blazina, & Watkins, 2000). These findings reflect concerning consequences of adherence to masculine norms and experiences of gender role conflict in gay men and are worth exploring more deeply as follows.

Health behaviors and well-being. It has been reported that both gay men and their heterosexual counterparts experience body image issues and desire to be thinner and more

muscular, but that body dissatisfaction is especially pronounced for gay men (Tiggemann, Martins, & Kirkbride, 2007). Conformity to masculine norms has been implicated as one explanation of this finding. For example, Kimmel and Mahalik (2005) examined conformity to masculine norms and minority stress as predictors of eating pathology in gay men. Though they did not find a significant relationship between conformity to masculine norms and overall body dissatisfaction, their results indicated a positive association between conformity to masculine norms and distress around achieving a masculine body ideal. This finding suggests that failure to meet a masculine body ideal is especially distressing for those gay men committed to embodying masculine norms. Similarly, Blashill and Vander Wal (2009) found that when regressed on eating disorder symptomology and body dissatisfaction, each of the four subscales of the Gender Role Conflict Scale (GRCS; O'Neil, Helms, Gable, David, & Wrightsman, 1986) emerged as significant predictors of worse outcomes. Taken together, these findings suggest that adherence to masculine norms and experiences of gender role conflict may negatively affect gay men's body image issues.

Masculine norms have been a generative area of research when examining gay men's high-risk sexual practices and perceived risk for exposure to HIV and other STIs. For example, heterosexual self-presentation, or one's preoccupation with being perceived by others as heterosexual, has been negatively associated with men who have sex with men's likelihood to have been tested for HIV in the last 12-months (Parent, Torrey, & Michaels, 2012). For those gay men who are knowingly positive for HIV, defining masculinity as sexual prowess has been positively associated with intentional unprotected anal intercourse, or "barebacking" (Halkits & Parsons, 2003), which is a notable and significant risk-factor for HIV transmission. It is worth noting that this particular literature often uses terms such as men-seeking-men (MSM) or men

who have sex with men that reflect behavioral patterns, which may not be synonymous with identity categories such as "gay" that may carry different social and political implications. It is in the interest of such research to include men who may be at a greater risk for HIV exposure regardless of how they identify socially or politically, but the implications of these findings must be considered with these population categories and the corresponding recruitment methods in mind.

Examinations of the relationship between gay men's endorsement of masculine norms and measures of well-being have also considered issues of psychological well-being. Simonsen, Blazina, and Watkins (2000) were likely the first to examine the relationship between gender role conflict, psychological distress, and willingness to seek professional psychological help in gay men. Utilizing the GRCS, these researchers examined the relationship between measures of willingness to seek help and experiences of anger, anxiety, and depression symptoms and each of the four GRCS subscales: restrictive emotionality (RE); restrictive and affection behavior between men (RAB); success, power, and competition issues (SPC); and conflicts between work and family relations (CBWF). The researchers found that the different subscales of the GRCS were positively associated with experiences of anger (SPC, RE, CBWF), anxiety (SPC, RAB, CBWF), and depression (SPC, RE, RAB, and CBWF) and accounted for 30% of the variance in these measures of psychological well-being. The restrictive emotionality (RE) and restrictive affectionate behavior between men (RAB) were also both negatively associated with a measure of willingness to seek help. The authors additionally noted that canonical correlations of these findings suggest restrictive affectionate behavior between men (RAB) is an especially important GRC variable for gay men, which on most accounts makes ready sense given the context of gay men's intimate relationships and the obstacle such a conflict must prove to successful romantic

partnering. Altogether, it appears that feelings of failure to live up to cultural expectations of what it means to be a man may produce more negative psychological symptoms in gay men, particularly when considering issues of restrictive affectionate behavior between men.

      Partner-seeking and romantic and sexual relationships. Issues of masculinity and gender role conflict permeate gay men's partner-selection behaviors and romantic relationships. For example, a recent study by Sánchez, Blas-Lopez, Martínez-Patiño, and Vilain (2016) examined masculine consciousness and anti-effeminacy attitudes in white and Latino gay men and the implications of these on four measures of negative gay identity: (a) need for privacy, (b) need for acceptance, (c) homonegativity, and (d) difficulty coming out. Both groups rated that they and their partners appear and behave masculine as more important than not, though Latino men rated the importance of themselves appearing masculine as significantly more important than did white men. The groups significantly differed on their levels of masculine consciousness and anti-effeminacy attitudes, with Latino men significantly more conscious of their masculinity and expressing somewhat more negative attitudes toward effeminate gay men than their white counterparts. These Latino men also rated the importance of themselves and their partner not being noticeably gay as significantly more important than did their white counterparts, though both groups rated these needs as less important than otherwise. Latino gay men were similarly more likely to endorse a greater need for privacy and acceptance, as well as less difficulty with coming out. Though the researchers simply examined differences between these two groups and did not regress the measures of masculine consciousness and anti-effeminacy attitudes on the negative gay identity measures or various metrics of partner preferences, it is worth noting that Latino men endorsed higher levels of masculine consciousness and anti-effeminacy attitudes, as well as partner preferences consistent with concerns about being perceived as masculine by

others. Based on these findings, it may be that masculine norms limit gay men in the partners and ways of relating to those that are "allowable."

Such masculine norms further limit gay men's experiences of romantic and sexual partnerships. Elder, Morrow, and Brooks (2015) recently explored the issue of gay men's sexual self-schemas with an eye toward masculinity. Utilizing a conceptualization of men's sexual self-schemas developed initially for heterosexual men (Brooks, 1995), the authors sought to qualitatively explore the extent to which the theorized elements of men's sexual schemas uniquely manifest in gay men's experiences. The authors maintained that gay men's sexual self-schemas might be summarized by five predominate elements: voyeurism, objectification, need for validation and trophyism, fear of true intimacy and engulfment, and experiences of internalized heterosexism (an element unique to gay men and not originally conceptualized in heterosexual men's sexual self-schemas). The authors interviewed 20 gay men regarding their relationships with other men across their lifespans. Participants noted that issues of "heteromasculinity" (i.e., performing masculinity stereotypical of heterosexual men) affect their romantic and sexual lives. For example, 18 of the 20 participants noted that they were exclusively attracted to "straight-acting" gay men; comparatively, none admitted an attraction to effeminate men. Previous research on gay men's partner-seeking behaviors is consistent with this finding, with gay men advertising for romantic and sexual relationships often explicit in their expectations of masculinity in their partners and distaste for traditionally feminine characteristics (Bailey, Kim, Hills, & Linesenmeier, 1997; Laner & Kimel; 1977; Lumby, 1978; Sánchez & Vilain, 2012). The elements of masculinity these men reported as desirable were considerably performative, with things like mannerisms and maintaining direct eye contact as measures of "heteromasculinity" in potential partners. This is consistent with findings from Sánchez and

Vilain (2012), in which gay men rated behaviors as more indicative of masculinity than appearances when forced to choose between the two. This desire for masculine-appearing men may likely be reflective of the process of defeminization noted earlier, through which gay men develop a consciousness for an expression of gender that is "heterotypical" in appearance. Such masculine consciousness may effectively narrow an already limited pool of potential romantic and sexual partners to traditionally masculine gay men.

Masculine norms continue to affect same-sex male relationships for those gay men who successfully partner. For example, Frost and Meyer (2009) used structural equation modeling to examine a number of variables specific to LGB persons thought to affect relationship satisfaction: internalized homophobia (IH), community connectedness, outness, and depression. In the model best fitting the data, outness and community connectedness did not emerge as significant predictors of relationship problems, though they were both negatively associated with IH and positively associated with one another. Instead, for all participants, internalized homophobia was positively associated with relationship problems. A further examination of this relationship revealed that depressive symptoms mediated it. A similar indirect effect of internalized homophobia on relationship strain emerged as significant, though this relationship was only observed for those participants currently coupled. As summarized more fully below, investigations suggest that as much as 40% of the variance in internalized heterosexism and negative feelings about being gay in gay men are explained by gender role conflict (Sánchez, Westefeld, Liu, & Vilain, 2010; Szymanski & Carr, 2008). Taken together, these findings may suggest that issues of masculinity permeate gay men's relationships through IH, depressive symptoms, and resulting relationship problems and strain. Such issues may have more egregious implications, as well. For example, Oringher and Samuelson (2011) found that in a community

sample of gay and bisexual men, higher endorsement of masculine norms around suppressing emotional vulnerability and heightened aggressiveness emerged as significant predictors of intimate partner violence (IPV) in their relationships. To the extent that the negative implications of masculine norms on gay men's relationships have been demonstrated empirically, teaching partnered and partner-seeking gay men to resist masculine norms and to cope with gender role conflict may be of especial importance.

Internalized heterosexism (IH). The implications of striving for heteromasculinity and its negative effects on gay identity and psychological distress may reflect the relationship between gender norms and internalized heterosexism. Though called by different names (e.g., internalized homophobia, internalized homonegativity, negative gay identity), internalized heterosexism is the internalization of negative societal messages about and by LGBQ+ people and assumptions about homosexuality (Szymanski, Kashubeck-West, & Meyer, 2008). Since it was first articulated by Weinberg in 1972, the construct has been central to the study of LGBQ+ people and has been used to detail LGBQ+ experiences of minority stress and its resulting impact on their well-being and identity development. The struggle against the internalization of heterosexism remains so central to the experiences of non-heterosexual persons that some scholars have suggested that it never truly abates, but instead that LGBQ+ persons surviving in a heterosexist society must themselves come to terms with its ubiquity (Meyer, 1995; Szymanski, Kashubeck-West, & Meyer, 2008).

Internalized heterosexism is intimately linked to experiences of gender role conflict in gay men. For example, Szymanski and Carr (2008) modeled gender role conflict, internalized heterosexism, and their impacts on mental health outcomes in a sample of gay men. The model best fitting the data suggested that as much as 41% of the variance in internalized heterosexism

(i.e., negative feelings about being gay) was explained by gender role conflict. Additionally, this study found that gender role conflict was negatively associated with self-esteem, which was itself negatively associated with ratings on the Hopkins Symptom Checklist (HSCL), a measure of psychological distress across five domains: depression, anxiety, somatization, interpersonal sensitivity, and obsessive–compulsivity. This suggests a wide-reaching impact of gender role conflict in gay men, not simply on negative evaluations of their gay identity, but also on experiences of decreased self-esteem and thereby greater psychological distress.

Sánchez, Westefeld, Liu and Vilain (2010) drew strikingly similar conclusions when regressing the four factors of gender role conflict in men (i.e., restrictive emotionality; restrictive and affection behavior between men; success, power, and competition issues; and conflicts between work and family relations) as well as gay men's reported importance of masculinity on a measure of negative gay identity. Results indicated that 40% of the variance in negative gay identity was accounted for by gender role conflict in their sample of gay men, with all factors but restrictive emotionality and success, power, and competition issues emerging as significant predictors of negative gay identity. This is consistent with the aforementioned finding from Sánchez and Vilain (2012) that anti-effeminacy and masculinity consciousness accounted for 30% of variability in negative gay identity in their sample of gay men. Taken together, these findings suggest that issues of gender (i.e., gender role conflict and masculinity consciousness) largely account for negative feelings about being gay, and that this relationship is consistent across the few studies to have examined it.

This relationship between masculine consciousness and internalized heterosexism has reaching impacts. For example, increased levels of internalized heterosexism have been associated with lower feelings of connectedness with other sexual minority people (Frost &

Meyer, 2012), which itself may be a potential mediator of the relationship between internalized heterosexism and psychological distress (Puckett, Levitt, Horne, & Hayes-Skelton, 2015). In this way, internalized heterosexism may not simply cause distress, but also isolate LGB persons from potential sources of support that would otherwise buffer against it. This is of particular concern for researchers and clinicians, as the potentially deleterious effects of internalized heterosexism are well-documented (Meyer, 2003). For example, internalized heterosexism has been associated with anxiety and depressive symptoms, substance use disorders, and suicide among LGB persons (Meyer & Dean, 1998; Szymanski, Kashubeck-West, & Meyer, 2008), as well as chronic forms of self-harm and eating disorders (Williamson, 2000). The proximal and insidious nature of internalized heterosexism may make gay men particularly vulnerable to its damaging effects on their psychological well-being (Meyer, 2003).

Additionally, it has been theorized that internalized heterosexism moderates the relationship between experiences of anti-gay prejudice and discrimination and psychological distress (e.g., Meyer, 1995). As gay men inevitably encounter negative societal messages and stereotypes about what it means to be gay, as well as have direct encounters with anti-gay bias, discrimination, and heterosexist microaggressions, lower levels of internalized heterosexism and consequently higher levels of positive gay identity predict the extent to which these messages permeate them psychologically. For example, gay men who evaluate their gay identity positively may be more likely to respond to acts of discrimination by placing blame on the perpetrators of such acts, rather than internalizing them as an inevitable consequence of being gay. This is instructive for clinicians, and many feminist or affirmative therapies intervene by fostering awareness of and challenging IH in gay clients (Kashubeck-West, Szymanski, & Meyer, 2008; Szymanski, 2005). What is often lacking in this instruction, however, is a discussion of the

interrelationship between internalized heterosexism and feelings of masculinity threat or gender role conflict in men, a discussion to which gay men may be especially receptive.

Ambivalence and the development of a critical perspective. Taken together, the previously reviewed findings suggest that the continued effects of masculine consciousness, anti-effeminacy, and gender role conflict among adult gay men have pervasive effects, many of which are restrictive and damaging toward their well-being, self-schemas, relationships, and gay identity. That being said, research by Sánchez, Greenberg, Liu, and Vilain (2009) suggests that adult gay men may be cognizant and equally critical of these gender role expectations and their negative effects. Using a modified consensual qualitative research (CQR) paradigm, these researchers analyzed survey data from 547 self-identified gay men spanning issues of masculinity and self-image and relationships among gay men. When asked to report the positive effects of ideals of masculinity on the self-images and relationships of gay men, the most frequently reported theme was by and large that there simply are none. Unfortunately, the same was not assessed for attitudes toward femininity (a notable gap in most research examinations of masculinity). Gay men in this study more readily reported a vast array of adverse consequences of masculine ideals, suggesting a certain level of consciousness around issues of gender conformity and its negative impacts on gay men and their masculinities.

Similarly, a clever examination by Miller and Behm-Morawitz (2015) suggests that gay men may also be critical of the anti-effeminacy attitudes espoused in gay men's partner-seeking behaviors. Using an experimental approach, these researchers exposed gay men to faux dating profiles that varied in their use of femmephobic language (i.e., language that expresses disdain, disgust, or apprehension toward femininity) and asked them to evaluate the men pictured on a number of characteristics and their desire to meet them for platonic, romantic, and sexual

purposes. The researchers found that participants perceived the men in faux dating profiles that contained femmephobic language as less intelligent, less sexually confident, and less dateable. Participants were also less likely to have a desire to meet these men for romantic and platonic reasons, though this relationship was moderated by anti-effeminacy attitudes such that participants lower in anti-effeminacy attitudes were less likely to want to meet the confederates for romantic or platonic purposes. Though no main effect emerged for femmephobic content on desire to meet for sexual purposes, this too was moderated by anti-effeminacy attitudes, such that participants lower in anti-effeminacy were less likely and participants higher in anti-effeminacy more likely to want to meet for sexual purposes. These findings when taken in light of previously summarized investigations suggest a certain ambivalence among gay men toward masculinity, with gay men both endorsing (perhaps out of necessity) and critically rejecting masculine ideals. It is important to highlight this ambivalence when discussing masculinity in gay men, particularly when considering interventions for reducing conflict between their perceived and ideal masculinities. It may be that gay men are particularly cognizant of their masculinity and therefore amenable to interventions promoting a critical perspective of hegemonic societal ideals in favor of a healthier masculinity.

Precarious Masculinity

In order to more fully understand gay men's experiences of masculinity, it is important to devote greater attention to the socially evaluative nature of masculinity and its limitations. As the above review suggests, gay men seek public affirmation of their masculinity through their mannerisms and behaviors, appearances, and even partner selection. The centrality of masculinity to these identities and such intentional identity management underscores a central characteristic of masculinity not spared on gay men: that it is hard won and easily lost.

The social psychological literature introduced the term "precarious manhood" to study this phenomenon, which theorists had for decades described across disciplines. Vandello, Bosson, Cohen, Burnaford, and Weaver (2008) first introduced this concept following a series of five studies of heterosexual men designed to delineate precarious manhood's nature and effects. These studies demonstrated that manhood needed to be consistently proven and actively achieved, relative to womanhood (therefore dubbing it "precarious"). The first of these five studies tested participants' endorsement of both proverbs and straightforward opinion statements regarding the precarious nature of manhood relative to womanhood, demonstrating that manhood was more strongly endorsed as precarious and marked by both biological milestones and social achievement. The second of these studies further supported the notion that manhood is marked more by social proof than biological states, with participants rating autobiographical narratives about loss of manhood as more readily understandable than those of lost womanhood and interpreting them more often in social terms. The first of these few studies provided initial evidence that conceptualized manhood as precarious, defined by social proof, and more easily lost than womanhood. If masculinity were so easily revoked, as the researchers hypothesized, how might they test the effects of this empirically?

It was in the fourth and fifth of these studies that the researchers actively manipulated a "threat" to men's masculinity, a paradigm described more fully in the methods section of this proposal. By purporting to evaluate respondents' level of achievement to a "gender knowledge test" and providing false feedback that men in these studies were much less masculine than the average participant (and women much less feminine), the researchers provoked high levels of anxiety in their male participants, with no significant effects found for women told they were less feminine than average. The final of these five studies exposed a darker side to the construct of

precarious manhood, such that men whose masculinity was threatened more readily accessed aggressive and hostile thoughts. Further research has continued to delineate this darker side to precarious manhood, with men whose masculinity has been threatened more likely to choose aggressive tasks over non-aggressive ones and exert greater force when doing so (Bosson, Vandello, Burnaford, Weaver, & Wasti, 2009), to experience a reduction of anxiety when given the opportunity to restore their masculinity through aggression (Weaver, Vandello, Bosson, & Burnaford, 2010), and to engage in greater financial risk-taking behaviors (Weaver, Vandello, & Bosson, 2013).

Of particular interest to this study is precarious manhood's effects on avoiding femininity. Vandello and Bosson (2013) suggested that inherent to the precarious nature of manhood is a dichotomization of gender (i.e., masculinity versus femininity) and a need to avoid femininity for fear of being perceived as feminine oneself. Indeed, gender nonconformity in men elicits much harsher backlash than similar transgressions in women (Levy, Taylor, & Gelman, 1995), and thus a rigid adherence to gender-typical behaviors and presentations may in fact be protective for men's gender status (Bosson & Michniewicz, 2013). This is similarly consistent with early conceptualizations of gender role conflict, which centralized fear of femininity as a restrictive force behind men's gender role socialization and masculine ideology (O'Neil, Helms, Gable, David, & Wrightsman, 1986; O'Neil, 2008), and with a pervasive element of gay masculinities (Taywaditep, 2001). Glick, Gangl, Gibb, Klumpner, and Weinberg (2007) demonstrated this effect empirically by manipulating threats to masculinity in a sample of heterosexual men and measuring their negative affective reactions toward vignettes of masculine and feminine gay men. Results indicated that negative affective reactions were greater for the vignettes described as feminine regardless of threat condition, but an interaction emerged such

that threats to masculinity produced greater negative affective reactions toward vignettes described as feminine, with no significant effects on reactions toward those described as masculine. These empirical investigations detail just how precarious masculinity is and the many ways in which it regulates and restricts men's attitudes and behaviors.

Gay men. The extent to which such findings generalize to samples of gay men are only minimally supported by experimental research on the effects of masculinity threat. To date, only one empirical investigation that I am aware of has examined the effects of masculinity threat using a sample of gay men (Hunt, Fasoli, Garnaghi, & Cadinu, 2016). The findings from this study are notably mixed, suggesting that gay men are significantly less likely to want to interact with other gay men described as feminine and more likely to consider themselves similar to men described as masculine when their masculinity has been threatened. Hunt et al. did not find a significant effect for threat on how likable gay men rated feminine versus masculine men or how comfortable they would be to have either of them occupy different roles in their lives (e.g., roommate, relative, neighbor, etc.). It is also worth noting that the study consisted of a sample of Italian gay men, and that no similar replication that I am aware of has been produced with a sample drawn from the United States gay population. The present study, therefore, seeks to further explore how a threat to masculinity is received by gay men and how the use of positive masculinity and femininity gender affirmations might be utilized to moderate resulting effects.

Gender Misclassification and Protective Affirmations

Central to this study is the empirical introduction of masculinity and femininity affirmation exercises that may amplify or attenuate the effects of masculinity threat. It is therefore worth reviewing the theoretical and empirical grounds upon which these affirmations are founded.

Steele and Liu (1983) first demonstrated that self-affirmations, or avowing some value of the self, allow individuals to resolve feelings of dissonance when acting or being perceived in ways misaligned with their self-concepts. This was a unique contribution at the time, as major theorists had believed such dissonance was best resolved through opportunities for restoration specific to the source of dissonance (e.g., volunteering to work with children with disabilities after being required to write a letter to defund hospitals supporting them). This and other findings led Steele (1988) to propose that the central goal of the self-system is to maintain a sense of self-integrity. Though this preservation may be accomplished by reducing threats to self-integrity directly, it may also be accomplished by utilizing self-affirmations that draw from alternative sources of positive self-identity. In this way, the effects of threatening information are minimized as self-identity in unrelated areas is bolstered. This perspective has since received a good deal of theoretical and empirical support, and self-affirmations have been demonstrated to attenuate a number of negative psychological and physiological effects (for a review, see Sherman & Cohen, 2006).

The perspective that self-affirmations may resolve dissonance regardless of dissonance material has not been without critique. For example, Prewitt-Freilino and Bosson (2008) took concern with too global a support for self-affirmations, noting their limited utility as interventions for individual's struggling with the dissonance fostered by what they called identity misclassification. Identity misclassification occurs when a privileged group is misidentified as a stigmatized group, such as when a heterosexual man is misidentified as gay due to some gender nonconforming behavior. Their perspective on this issue is worth citing in-full:

Nonetheless, we suggest that a standard self-affirmation cannot by itself buffer people

from the interpersonal threat of punishment that arises during identity misclassification.

Even if self-affirmations allow people to restore a sense of integrity and worth, they can do little to protect people from the potential rejection and abuse that often accompany stigmatization, and that threaten the need to belong. Thus, because identity misclassification involves not only an intrapsychic threat to coherence, but also an interpersonal threat to the actor's social relationships, a standard self-affirmation should not protect people fully from the discomfort of erroneous stigmatization. (p. 171)

Prewitt-Freilino and Bosson tested this expectation using a sample of heterosexual men. Prior to engaging in a filmed task considered traditionally feminine, these men were given the opportunity to engage in one of four tasks. Men in the first "control" condition engaged in what was essentially a descriptive writing task unrelated to their identities as heterosexual or male. Similarly, men in the second "disclaimer" condition engaged in an unrelated writing task, but were asked to make their sexual orientation explicit on their writing form. Men in the third "self-affirmation" condition wrote for several minutes about an important personal value unrelated to masculinity. Finally, men in the fourth "masculinity affirmation" condition wrote for several minutes about an important skill or activity considered traditionally masculine. Following the completion of this task and the masculinity threat, participants completed measures of affect, self-consciousness, and implicit self-evaluation. Results indicated that both men given the chance to make explicit their heterosexuality or those who affirmed their masculinity experienced higher self-evaluations compared to the control condition. However, comparisons revealed that only those men given the chance to make their heterosexuality explicit experienced lower discomfort than those in the control. This provides some evidence for the use of masculinity affirmations as a buffer against the harmful effects of masculinity threat, though for

heterosexual men, making explicit their heterosexuality may prove more valuable. It nonetheless challenges the assumption that any self-affirmation will buffer against threats to self-integrity, as the more general self-affirmation failed to.

To what extent these findings generalize to gay men is questionable, and further investigations have suggested that heterosexuality disclosure as a means of restoring identity may actually produce greater antigay reactions (Bosson, Weaver, Caswell, & Burnaford, 2011). The researchers' use of masculinity affirmations is nonetheless of particular interest to this study. Unlike heterosexual men, gay men do not risk being misidentified as gay if engaging in a stereotypically feminine task. The threat instead is to be identified as a *feminine* gay man, which may put them doubly in jeopardy for social repercussions. Additionally, men in this study will not engage in a feminine task that makes them *appear* feminine; instead, they will receive feedback that they *are* less masculine than men on average. For this reason, masculinity affirmations may be less likely to produce buffering effects and instead create greater dissonance in the face of "objective" data disputing gay men's masculinity. Indeed, there is some empirical support that affirmations in the same domain as that which provoked dissonance may exacerbate such feelings by making salient the personal values that dissonant information or behaviors threaten (Blanton, Cooper, Skurnik, & Aronson, 1997). A masculinity affirmation prior to exposure to "objective" material disputing a participant's masculinity may therefore make such material all the more threatening.

It is therefore worth exploring an alternative affirmation that challenges the importance of masculinity in men's positive evaluations of self by turning their attention instead to the merits of femininity, though this may prove challenging. For example, across a series of five studies, Bosson and Michniewicz (2013) demonstrated that men more than women engage in gender

dichotomization, or tend to associate men with masculinity and women with femininity. This was particularly true when men were reminded of their "precarious" gender status or when informed that their in-group is becoming less dichotomized. This may suggest that affirmations of femininity will be less powerful or accessible to men then, say, affirmations of masculinity might be for women. However, these studies employed general student and nonstudent samples, and it is therefore unclear to what extent gay men are represented by these findings. Findings from two of these studies suggested that such gender dichotomization was especially true for those men who strongly identified with their in-group; to what extent gay men strongly identify with their male identities is similarly unclear. Nonetheless, this dichotomization provides some support in favor of a femininity affirmation as antidote to masculinity threat. If gay men perceive gender in a dichotomized way similar to that of heterosexual samples and are primed to evaluate their femininity positively, then it may be that such an evaluation necessitates a devaluation of their masculinity. This may in-turn minimize masculinity threat and render it less assaultive, thereby attenuating its effects.

Research Questions

Based on the previously summarized literature review, I sought to explore a number of research questions using the research design described in the following sections. Specifically, I hoped to answer the following questions:

Research Question #1: Will exposure to a masculinity threat affect gay men's self-report of affect, internalized heterosexism, and self-esteem when compared against participants otherwise not threatened?

Research Question #2: Will engagement with masculinity or femininity gender affirmation exercises affect gay men's self-report of affect, internalized heterosexism, and self-

esteem when compared against participants engaged in a control writing task, and will either of these exercises prove more or less beneficial?

Research Question #3: Will engagement with a gender affirmation exercise interact with exposure to a masculinity threat, such that individuals preemptively exposed to a gender affirmation exercise display differences in their self-report of affect, internalized heterosexism, or self-esteem compared to those otherwise engaged in a writing task and/or not exposed to a masculinity threat?

Method

Participants

An *a priori* power analysis was conducted to calculate the total number of participants needed to achieve statistical power of .80 with a medium effect size ($f^2 = 0.15$) and an overall alpha-level of .05 for multiple linear regressions testing main effects and interaction terms. A medium effect size is consistent with findings from previous research of masculinity threat, both with heterosexual and gay men (e.g., Hunt et al., 2016). The G*Power V3 software (Faul, Erdfelder, Lang, & Buchner, 2007) recommended a total sample size of 92 participants for these parameters. Given the increase risk for Type I error associated with conducting multiple statistical tests, I sought to collect a sample of 160 participants, with a sample of 152 participants recruited.

This sample was recruited based on available best practice recommendations and empirical support (e.g., Meyer & Wilson, 2009; Mustanski, 2001; Riggle et al., 2001). In the interest of efficiency and seeking a representative sample, traditional recruitment methods of sampling listservs hosted by LGB organizations and advocacy groups were not utilized; instead, Facebook's advertising tools were used. Such tools allow researchers to create advertisements

for their studies that are then "promoted" and specifically targeted to subpopulations of Facebook users based in-part on their expressed interests on Facebook. For this reason, a number of key words were used to target users based on LGBTQ+ interest categories, particularly those specific to gay men (e.g., "gay," "LGBT rights," "gay bars," and interest in specific outlets such as "Buzzfeed LGBT"). These interests were used to promote two simple calls for study participants that included the incentive to be entered into a drawing for one of three $35 Amazon gift cards. One such call included a picture of two white men romantically embracing, and the other included a picture of a mixed race couple embracing, both of whom appear to be men of color. Interested users exposed to the advertisement simply clicked an attached web link, which then directed them to this online experiment.

Though Facebook advertising technologies and algorithms are complex, they provide a simple advantage over traditional listserv recruitment for gay men. Though the targeted advertising in this study may have been limited by the degree of "outness" among study participants comfortable expressing interest in LGBTQ+ material on Facebook, such a limitation is no more excessive than that of advertising through established LGB group listservs, which may be even further limited to gay men specifically engaged with such organizations. Further, such Facebook advertising may have an advantage of sampling a more diverse and therefore representative sample of gay men that may not be adequately reached by listserv announcements (DeBlaere, Brewster, Sarkees, & Moradi, 2010). This recruitment method may therefore more effectively sample those gay men disconnected from mainstream LGB organizations.

The experiment was completed by 152 participants, 23 of whom were determined to be ineligible or to have provided questionable data (i.e., they failed more than two of the three validity checks, were not a gay male 18 years or older, or skipped the initial writing task) and

were therefore removed from subsequent analyses, which were completed with a sample of 129

gay men. IP addresses were also used to ensure participants were only represented once in the

dataset, and no duplicate submissions were found. The sample was largely European white

(76.7%) and cisgender (99.2%), with a mean age of about 41.9 years old ($SD = 15.8$).

Demographic information for this sample is summarized in Table 1.

Procedure

All participants were directed to an informed consent page for a Qualtrics survey upon

clicking the web link made available in the Facebook advertisements. Participants simply

checked a box below the informed consent information that reads, "I have read this form and

have had all my questions answered to my satisfaction. The submission of a complete survey

constitutes my consent. Only persons over 18 (who identify as gay men) should participate"

(parenthetical content added; Mustanski, 2001, p. 298). Not requiring participants to provide

identifying information such as their name was identified as one way to encourage perceived

anonymity.

Following this informed consent, participants were randomly assigned to one of three

writing exercise conditions, namely the a) control writing task condition, b) masculinity

affirmation exercise condition, or c) femininity affirmation exercise condition. These are

modeled after the tasks described by Prewitt-Freilino and Bosson (2008), with slight variations

regarding the actual content of the gender affirmation exercises. In the control condition,

participants were asked to write about a "neutral, non-self-relevant" topic; specifically, they were

asked to write instructions on how to get from one place to another without mentioning street

names or landmarks. This was assumed to require a similar time-commitment as the other two

conditions and used to control for variance due to written exercise in general. In the masculinity

and femininity affirmation conditions, participants were asked to choose three to five adjectives and descriptors from a list of ten to write for several minutes about an activity, relationship, or life domain that is considered important and enriching. In the masculinity affirmation condition, this list included adjectives and descriptors considered traditionally masculine, such as assertiveness or competitiveness. In the femininity affirmation condition, this list included adjectives and descriptors considered traditionally feminine, such as compassion and warmth. Given the novel nature of these affirmation exercises, an explorative pilot study was conducted using a sample of 285 men recruited through Amazon's Mechanical Turk service (see Buhrmester, Kwang, & Gosling, 2016 for a review) to refine them. Pilot study participants were asked to complete either of the affirmation exercises, as well as measures of their affect, and then asked to rate the degree to which each of the original 30 descriptors or adjectives were characteristically feminine or masculine. Of these descriptors, the ten descriptors or adjectives that were rated either most extremely masculine or feminine were retained for use in their corresponding affirmation exercise. The complete writing and affirmation exercises are available in Appendix B.

Following the writing exercises, participants were either exposed to a masculinity threat or a control test result. In the control condition, participants were told that they scored in the average range on an "index masculinity score" relative to other men, and in the masculinity threat condition, participants were told that they scored noticeably below the average on the measure. The stimuli used in either condition is available in Appendix C. Following this false feedback, participants completed measures of self-esteem, positive and negative affect, and internalized heterosexism. In each of these measures, validity checks were inserted to assure

attentive responding (e.g., participants were asked to select "strongly agree" for a particular item).

After these tasks, participants completed a brief demographic questionnaire and were given a full written debrief regarding the true nature of the experiment and the false nature of the feedback that they received. This debrief included rationale for the study, citations for participants interested in learning more, and information for contacting the researchers should they have further questions or want to withdraw their previous consent and have their data removed from the study. Participants concluded the study and were provided with information on how to submit their email for entry into the aforementioned drawing.

Stimulus Materials

"Personality test" and false feedback. Consistent with previous examinations of masculinity threat in both heterosexual and gay samples (e.g., Hunt, et al., 2016; Hunt & Gonsalkorale, 2014; Hunt, Gonsalkorale, & Murray, 2013) participants were randomly assigned to one of two conditions: exposure to a control or a masculinity threat. To accomplish this, participants were told the researchers "are currently testing the readability of reports provided by a new survey tool" that would provide them with a personalized masculinity index score relative to other men "based on the adjectives and descriptors [they] chose in the previous [affirmation or control writing task] exercise, as well as a word-by-word analysis of [their] write-in response by a text analyzer embedded in our survey." In the control condition, participants were told they scored in the average range on this masculinity index, and in the masculinity threat condition, participants were told that they scored noticeably below the average relative to other men. To increase engagement with this false feedback, participants were told they would be providing feedback on the measure at the conclusion of the study, given the researchers need to test the

readability of its results. A similar stimulus has been used successfully in previous examinations of masculinity threat with samples of heterosexual men and one sample of gay men (i.e., Hunt, Fasoli, Garnaghi, & Cadinu, 2016), generally producing moderate effect sizes in a range of compensatory reactions to the threat, including distancing from feminine gay men (Hunt, Fasoli, Garnaghi, & Cadinu, 2016), engaging in gendered harassment behaviors (Hunt & Gonsalkorale, 2014), and reporting higher negative affective reactions toward feminine gay men (Glick, Gangl, Gibb, Klumpner, & Weinbeg, 2007).

Measures

Demographic form. Participants completed a variety of standard demographic questions, including questions detailing age, gender identity, race/ethnicity, sexual orientation, level of education, and so forth. Gender and sexual orientation were used as validity checks to ensure participants met the specified requirements for inclusion in subsequent analyses.

Affect. Participant affect was measured using the Positive and Negative Affect Scale (PANAS; Watson & Clark, 1999). The PANAS consists of 20 words and phrases that "describe different feelings and emotions." Participants were asked to read each item and rate the extent to which they have felt that way on a scale ranging from 1 ("very slightly or not at all") to 5 ("extremely"), with a mid-point at 3 ("moderately"). In previous investigations, these 20 items load onto two distinct though related factors of positive and negative affect. Higher mean scores indicate higher levels of negative and positive affect. Cronbach's alpha estimates of internal consistency for the Positive and Negative Affect subscales of this measure range respectively from .83 to .90 and .79 to .93 across studies summarized by Watson and Clark (1999), demonstrating generally good to excellent internal consistency. An investigation by Crawford and Henry (2004) provided convergent validity for the PANAS, with positive affect negatively

associated and negative affect positively associated with a number of measures of depression, anxiety, and stress. Scores in the current study's sample yielded an alpha of .92 the positive affect subscale and an alpha of .84 on the negative affect subscale of the PANAS.

Internalized heterosexism (IH). In their review of the literature on the measurement and many correlates of internalized heterosexism, Szymanski, Kashubeck-West, and Meyer (2008) included the need to study the stability of IH over time and to better detail factors that increase or decrease it among their list of suggestions for future research. For this reason and in accord with previous empirical investigations implicating gender role conflict in experiences of IH (e.g., Szymanski & Carr, 2008), IH was measured as an outcome variable in this study using the Internalized Homonegativity Inventory (IHNI; Mayfield, 2001). The IHNI consists of 23 items assessing negative attitudes gay men have toward homosexuality in general and in reference to themselves as gay men. Factor analysis of the items revealed items loaded onto three subscales of the IHNI, namely Personal Homonegativity (e.g., "I feel ashamed of my homosexuality"), Gay Affirmation (e.g., "I am thankful for my sexual orientation"), and Morality of Homosexuality (e.g., "I believe it is morally wrong for men to be attracted to each other"). Participants are asked to rate their level of agreement with items on a 6-point Likert scale from 1 ("strongly disagree") to 6 ("strongly agree"). Higher mean scores indicate greater levels of IH. The IHNI has demonstrated reliability, with a full-scale alpha-score of .91. Mayfield (2001) also demonstrated strong validity evidence for the measure, with scores on the IHNI correlated with measures of sexual identity development and another measure of internalized heterosexism in ways anticipated theoretically. Similarly, Mayfield (2001) demonstrated that the IHNI was conceptually distinct from measures of extroversion, social desirability, and neuroticism. It was reasoned that for the purposes of this study the opposing Personal Homonegativity and Gay

Affirmation subscales of the IHNI would suffice, and the Morality of Homosexuality subscale was therefore removed. This was due in-part to a consideration of the relatively abstract attitudes measured in the items of the Morality of Homosexuality subscale, which were considered less malleable to the effects of a one-time affirmation exercise and masculinity threat, and in the interest of lessening fatigue among participants. Scores in the current study's sample yielded an alpha of .89 on this abbreviated version of the IHNI.

Self-esteem. Self-esteem was measured using the Rosenberg Self-Esteem Scale (RSES), a 10-item measure of an individual's sense of self-worth and feelings of self-acceptance (Rosenberg, 1965). Respondents were asked to rate their level of agreement on a 4-point scale ranging from "strongly agree" to "strongly disagree" to a series of both positively and negatively valenced statements, such as "I feel that I am a person of worth, at least on an equal plane with others" and "All in all, I am inclined to feel that I am a failure." Higher cumulative scores reflect higher levels of self-esteem.

Adequate levels of reliability and validity have been demonstrated for the RSES, even with samples of gay men. Rosenberg (1965) demonstrated construct validity for the RSES by correlating it with several mental health measures theoretically expected to be associated with self-esteem, such as those of anxiety and depression. It has been reported that reliability for the measure was an alpha of .93. Similarly, Szymanski and Carr (2008) reported an alpha of .90 for RSES scores in their sample of 210 gay and bisexual men. In their study, internalized heterosexism and gender role conflict were negatively correlated with and accounted for 27% of the variance in self-esteem, and self-esteem was negatively correlated with psychological distress, though it is worth noting that the researchers used both the RSES and a second measure of self-esteem. This suggests that self-esteem is an important factor in the relationships between

gender role conflict, internalized heterosexism, and psychological distress and that the RSES produces valid scores measuring it. Scores in the current study's sample yielded an alpha of .91 on this measure.

Results

Analyses

A missing data analysis revealed that less than 1% of data were missing, which was corrected using the multiple imputation algorithm in SPSS. Table 2 displays the means, standard deviations, and internal consistency reliability coefficients for the outcome variables assessed. Each of the variables yielded acceptable reliability estimates (α = .84 - .91). Bivariate correlations were also analyzed among these variables, with established relationships reflected among these measures. These are summarized in Table 3. It is of note that significant correlations were in expected directions, such that internalized heterosexism was positively correlated with negative affect and negatively associated with self-esteem, and such that self-esteem was positively associated with positive affect and negatively associated with negative affect.

The research questions posed in this study focused on between-subjects variability in gay men who are exposed to either a masculinity affirmation exercise, femininity affirmation exercise, or a control writing task and whose masculinity is either threatened or not, with self-esteem, internalized heterosexism, and negative and positive affect measured as outcome variables. This represents a three (affirmation task) by two (masculinity threat condition) factorial design with four dependent variables (self-esteem, negative and positive affect, and internalized heterosexism).

To first ensure parity between writing conditions, the time to completion for participants based on their writing exercise conditions was examined. Three outliers were removed from this analysis, as these participants took substantially longer than others (i.e., greater than 200 minutes). On average, the remaining 124 participants took 17 minutes to complete the study (SD = 9.77 minutes). To compare the affirmation exercises to the control writing task, an independent samples t-test was conducted collapsing both affirmation exercises into one group and comparing them against the control, with neither group taking significantly less time than the other to complete the study ($t(124) = .687, p > .49, d = .13$).

To answer the study's research questions, a series of multiple linear regressions were conducted for each of the outcome variables. A dummy code was created for the masculinity threat condition, and dummy codes were created for the femininity affirmation and masculinity affirmation exercises. These were entered in Step 1 of each model. Interaction terms were created for the affirmation exercise by threat condition interactions and entered in Step 2. Omnibus tests reveal that none of these models were significant at either step. There were no significant main effects for engaging in a masculinity or femininity affirmation exercise, or for masculinity threat condition on the four outcome variables. Omnibus tests of the interaction terms were also nonsignificant across dependent variables. This suggests that the two experiment variables (writing task condition and threat condition) and their interaction did not significantly affect the positive affect, negative affect, internalized heterosexism, or self-esteem scores of the sample. Key statistics and results of these multiple linear regressions are summarized in Table 4.

Post-Hoc Manipulation Checks

Participants and Procedure

Following completion of this study, an additional 97 gay male participants were recruited to assess whether the masculinity threat manipulation activates gendered discomfort in gay men and whether the affirmation exercises activate positive feelings in them, given concerns that the non-significant results summarized here may be due to a failure of the masculinity threat or gender affirmation exercise stimuli. Of these 97 gay men, 13 were determined to be ineligible or to have provided questionable data (i.e., they were not a gay male 18 years or older or skipped the initial writing task) and were therefore removed from subsequent analyses, which were completed using the remaining sample of 84 gay men. IP addresses for this sample were used to ensure each participant was only represented once in the dataset; similarly, these addresses were compared to that of the original study's sample. No participants were found to have taken both studies or either study twice. Participants in this assessment were nonetheless characteristically similar to those of the original study, with 96.5% identifying as cisgender and 80% identifying as White, and with a mean age of 42.30 years old ($SD = 22.50$). The procedure for recruitment, exposure to a written exercise, and exposure to a masculinity threat or no threat was similar to that of the original study. However, in addition to this procedure, participants in this assessment were asked to rate eight items assessing their discomfort with their masculinity scores, as well as how accurate and incongruent with expectations they found them to be. Participants were not asked to complete the PANAS, RSES, or IHNI-abbreviated measures in the interest of brevity. Before the conclusion of this assessment, participants were also asked what they believed was the purpose of the study to assess whether the manipulations were believable and guised appropriately. These additional items are summarized in Appendix I.

Masculinity Threat Manipulation Checks

Consistent with previous investigations (Frederick et al., 2017; Hunt, Gonsalkorale, & Murray, 2013; Schmitt & Branscombe, 2011), following exposure to their false feedback, participants were asked to rate their reactions to the false feedback on a number of items using a 7-point Likert scale ranging from strongly disagree to strongly agree. Findings from these items are summarized in Table 5. Six of these items were specific to affective reactions (e.g., "I feel good about myself after seeing my masculinity score"), with two items reverse-coded (e.g., "I am disappointed in my masculinity score"). These six affective items were summed to form a composite score, referred to as the Masculinity Satisfaction Score (Frederick et al., 2017), with higher sum scores indicating greater discomfort with one's faux masculinity results. This measure has generally demonstrated good internal reliability, with previous investigations producing an alpha of above .80 (Frederick et al., 2017; Hunt, Gonsalkorale, & Murray, 2013; Schmitt & Branscombe, 2011) and with these items producing an alpha of .87 in this study. An independent samples t-test was run to compare scores of men in the threat condition ($M = 19.40$, $SD = 7.30$) with those of men in the affirmation condition ($M = 16.13$, $SD = 5.65$) on this measure, with mean scores significantly different in the expected direction ($t(82) = -2.271$, $p < .03$, $d = .50$). Consistent with previous investigations, men in the threat conditions were notably less comfortable with their scores than those whose scores were not intended to be threatening.

Two items were also included to assess whether participants experienced their scores as lower or higher than they had expected (Frederick et al., 2017). Given that masculinity threats are thought to be inconsistent with how men perceive themselves, it was expected that men in the threat condition would more strongly agree with the item suggesting that their score was lower than expected and more strongly disagree with the item suggesting that their score was higher than expected. This expectation was also found to be true, with men in the threat condition

experiencing their scores as significantly lower than expected ($M = 4.47$, $SD = 1.62$) than those

men whose scores were not threatening ($M = 2.44$, $SD = 1.27$; $t(82) = -2.03$, $p < .01$, $d = 1.40$).

Threatened men were also significantly less likely to endorse the item suggesting their score was

higher than expected ($M = 2.60$, $SD = 1.27$) relative to men who were not threatened ($M = 4.49$,

$SD = 1.68$; $t(82) = 1.89$, $p < .01$, $d = 1.27$). These are also summarized in Table 5.

       Further manipulation checks were included to assess the perceived accuracy and

believability of the masculinity threat stimulus. On a 7-point Likert scale ranging from strongly

disagree to strongly agree, participants were asked to rate their masculinity scores for accuracy

using items borrowed from Hunt, Gonsalkorale, and Murray (2013; i.e., "I feel that my results

accurately reflect me as a person" and "My results do not reflect how I see myself"). Should the

manipulation checks be received as accurate and believable, it was expected that participants in

either condition would rate these items similarly. As expected, participants in the threat and no-

threat conditions found their scores to be similarly accurate ($t(82) = 5.85$, $p > .15$, $d = .32$) and

similarly reflective of how they see themselves ($t(82) = -1.50$, $p > .14$, $d = .34$). It appears that

while participants may have expected their scores to be higher or dissatisfying when threatened,

as noted previously, they nonetheless were able to view these scores as accurate and truly

reflective of themselves.

       A final question was asked before participants were debriefed to assess the degree to

which participants were able to guess the true purpose of the study (i.e., "What do you believe

was the purpose of this study?"). Of the 84 participants to complete this post-hoc assessment,

nine (10%) accurately assessed the purpose of the study. These did not appear to be specific to

any one condition, as five of these were in the no-threat condition, four of these were in the

threat condition, and all were distributed evenly across the three writing exercise conditions.

Though this may call into question the validity of the data they provided, it is worth noting that the purpose of the post-hoc assessment may have been more easily assessable than in the original study, given the lack of outcome measures that may otherwise have guised the study purpose and given the explicit manipulation checks that may have revealed the purpose of this post-hoc assessment. Further, it is expected that these participants, accurately aware of the false nature of the study feedback, would not have been affected by the masculinity threat prime. These participants were nonetheless included in subsequent analysis to best reflect the conditions of the analyses of the original study, which did not exclude participants based on suspicion about the study's purpose. Given that such participants were likely less affected by the prime than those who were ignorant to its purpose, the significant manipulation check findings summarized previously are likely more conservative and for that reason more robust than those that would otherwise have removed these participants.

Affirmation Exercises Manipulation Checks

In order to assess the effectiveness of the gender affirmation exercises, I utilized the Linguistic Inquiry and Word Count (LIWC2015) software developed by Pennebaker, Boyd, Jordan, and Blackburn (2015) to further analyze the written responses of this sample. The LIWC was initially developed as an exploratory study of language (Pennebaker, 1993) and has since been used in a number of studies of written text. Since its inception, the program's creators have developed four successive versions of the program (Pennebaker, Booth, & Francis, 2007; Pennebaker, Boyd, Jordan, & Blackburn, 2015; Pennebaker, 1993; and Pennebaker, Francis, & Booth, 2001), and for the purpose of this post-hoc assessment, I utilized the most recent version. The LIWC2015 scans target text files for 6,400 key target words, word stems, and select emoticons that are organized into hierarchal "dictionaries" based on categorical relevance (for a

review of the developmental process of such dictionaries, see Pennebaker, Boyd, Jordan, & Blackburn, 2015). Words that are found in the text file that contribute to a particular dictionary (e.g., the word "hurt" is organized in the "negative emotion" dictionary) are recorded incrementally, until a cumulative or percentage scale score for each dictionary is recorded for each scanned body of text. Words included in one dictionary (e.g., "cried" in the "negative emotion" dictionary) may also contribute to the count for other appropriate dictionaries (e.g., "cried" is counted for the "overall affect" dictionary). Each text file is scanned for approximately 90 output variables, including a number of descriptor variables (e.g., number of words per sentence), linguistic dimensions (e.g., percentage of words that are pronouns) and punctuation categories that can be used to assess written text along a number of dimensions. Research using the LIWC has been deeply fruitful, with its many dictionaries associated with psychological constructs from identity characteristics such as social class to psychoemotional correlates such as inhibition, cognitive complexity, and passivity (Tausczik, & Pennebaker, 2010).

For the purpose of this assessment, a number of the available output variables were selected. First, it was expected that responses to the control writing task would not vary substantially in the overall word count, number of words used per sentence, count of unique dictionary words, and use of punctuation relative to the affirmation exercises. Independent samples t-tests were conducted on each of these variables by collapsing both affirmation exercises into a single group and comparing these against the control writing task. As expected, none of these variables were significantly different between the two groups, suggesting that a similar amount of effort was placed into completing each of the written exercises. These are summarized in Table 6.

Given their similarity in length and required effort, it was important to distinguish the affirmation exercises from the control writing task in terms of their written content. Using the LIWC2015 dictionaries consistent with previous investigations, it was predicted that responses to the affirmation exercises would describe more affective processes, invoke greater positive affect (Bosson, Swann, & Pennebaker, 2000; Creswell, Lam, Stanton, Taylor, Bower, & Sherman, 2007), relate to social processes with greater frequency (Neff, Kirkpatrick, & Rude, 2007), and require greater cognitive processes, such as insight, than the control writing task. Independent samples t-tests were conducted to compare the affirmation exercises against the control writing task on each of these outcomes, and each was statistically significant in expected directions. These results are also summarized in Table 6 and offer further credence to the validity of these exercises in activating positive affect and more reflective thought in this sample of gay men.

Discussion

The current study aimed to explore a number of research questions regarding the effects of masculinity threat on affect, internalized heterosexism, and self-esteem in a sample of gay men, as well as the potential for gender affirmation exercises to moderate these effects. This study provides further evidence of the well-established relationships between internalized heterosexism, self-esteem, and positive and negative affect in gay men. However, its novel introduction of gender affirmation exercises and application of a masculinity threat paradigm to an empirical investigation of gay men returned no significant findings. The limitations of this study not withstanding, these nonsignificant findings may provide important insights into gay men's unique relationship to the precariousness of masculinity and threats inherent therein. Further, they may offer important distinctions between this relationship and that of heterosexual men, as this study failed to demonstrate any deleterious effects of masculinity threat on this

sample of gay men (beyond mere dissatisfaction or surprise with one's score), a finding unique given the well-documented and deleterious implications of such threats on various outcome measures in studies of heterosexual samples (e.g., Vandello & Bosson, 2013). Given the complex and often ambivalent relationship of gay men to masculinity and the mixed research literature on the subject (e.g., Sánchez, Greenberg, Liu, & Vilain, 2009), these findings appear consistent in complicating our understanding of this relationship while encouraging its deeper interrogation, though caution must reasonably be taken when drawing further conclusions from the data.

Notably, the nonsignificant effect of masculinity threat on reported outcome measures, regardless of written exercise and in spite of post-hoc manipulation checks of the experimental stimuli, runs counter to a robust and consistent literature documenting its negative effects in samples of heterosexual men (e.g., Vandello & Bosson, 2013). To my knowledge, this study is only the second of its kind to apply this masculinity threat paradigm to a sample of gay men (the first being Hunt et al., 2016), and the only of which to apply it specifically to a United States sample. Given this lack of research using samples of gay men and the resulting lack of hypotheses to drive this empirical inquiry, such nonsignificant findings leave greater questions than answers and warrant caution in further speculation and interpretation of its results. Though such conclusions should be made tentatively and limited to the outcome measures used in this study, the results of this study may suggest that gay men may not be threatened by negative evaluations of their masculinity in the same way heterosexual men are. It may be that in the private context of this study (i.e., that respondents completed it online, likely in the privacy of their homes and with the assumed anonymity of an online context) such a masculinity threat would not prove as impactful as a more public evaluation of participants' masculinity. This would be consistent with findings that gay men report behaving and therefore appearing

masculine as important in themselves and partners (Sánchez & Vilain's, 2012). Given the greater threat to gay men's safety in being read as feminine (and therefore read as gay), such a public evaluation may elicit greater negative reactions than the false evaluation of participants' written responses to the study's gender affirmation exercises, which in this study were said to be produced by a "text analyzer embedded in [the] survey." Hunt and colleagues (2016) arrived at similar conclusions when reviewing their findings that masculinity threat in gay men did *not* affect participants' ratings of likability of or comfort with a characteristically feminine gay man, but instead decreased their desire to interact with such a feminine gay man and increased their feelings of similarity toward a masculine gay man, suggesting a need for threatened participants to defend against appearing less masculine.

Conversely, these nonsignificant findings may suggest that gay men are overall less susceptible to threats to their masculinity relative to heterosexual men, given that the stimulus used in this study is common to many studies of masculinity threat and nonetheless did not seem to affect this sample of gay men in the same way. It may be that gay men's relative childhood gender nonconformity and their unique experience of developmental defeminization (Bailey & Zucker, 1995) involve confrontations with masculinity threats (e.g., others referring to them as "sissies" or other gendered slurs) that inoculate them in adulthood to their deleterious effects. Though this may result in gay men learning to perform masculinity through their behaviors, retaining their psychological femininity into adulthood may buffer against masculinity threats and contribute to an overall higher self-esteem (Harry, 1983). This may help to explain the contradictory finding that gay men in the post-hoc manipulation check analyses did in fact experience their masculinity scores as lower than expected and as dissatisfying when told they were appreciably less masculine than their heterosexual counterparts, but still found this

feedback to be accurate and reflective of themselves. Further, it has been noted that the experience of discrimination around one's gay identity necessitates the development of coping strategies (Meyer, 2015). Though research on the development of such resiliency is still lacking for LGBTQ+ people, Kwon (2015) noted a number of psychoemotional resources such as openness, hope, optimism, altruism, and engagement with social justice efforts that act as mechanisms by which LGB persons develop resiliency. Such resiliency and learned coping strategies may generalize to encounters with other forms of prejudice and identity-based stressors, such as that of a masculinity threat, and help to explain the nonsignificant findings of this study. For example, it may be that when confronted with a dissatisfying evaluation of their masculinity, as in this study, gay men activate such coping strategies and therein buffer themselves against the potentially deleterious effects of masculinity threat on their affect, self-esteem, and experience of internalized heterosexism. However, such interpretations are largely speculative at this time and necessitate further investigation into whether these coping skills generalize to gendered issues and how gay men employ or fail to employ them in defending against threats to their masculinity.

The nonsignificant findings from this study may also be understood in the context of gay men's experiences of heterosexism in everyday life. Experiences with discrimination likely communicate the gendered stereotypes associated with gay men's sexual identities. This socialization may prove as much opportunity as liability in developing healthier masculine identities. For example, it has been observed in three studies that gay men have fewer issues of gender role conflict than their heterosexual counterparts, particularly considering those of restrictive emotionality, issues of success, power, and competition, and restrictive affectionate behavior between men (Naranjo, 2001; W. D. Shepard, 2001; Van Hyfte & Rabinowitz, 2001).

This is consistent with findings from a qualitative research study of lesbian women and gay men, in which participants frequently noted "freedom from gender-specific roles" as one positive aspect of being gay (Riggle, et al., 2008), as well as an exploratory CQR study of gay men in which participants were most frequently unable to report positive effects of masculine ideals on gay men's self-image and relationships and instead noted a number of their deleterious effects (Sánchez, Greenberg, Liu, & Vilain, 2009). This paired with the alternative representations of gender identity and expression often offered in LGBTQ+ discourse and imagery may encourage the development of alternative or "queer masculinities" that protect against the threats posed in this study. It may be that these complementary and intersecting elements of the self—one's masculinity, and one's gay identity—allow for a more flexible self-image than is available to heterosexual men, wherein gay men may take pride in their masculinity when it is affirmed and otherwise disinvest from it when it is threatened. This may be reflected in this study, for example, in gay men experiencing negative evaluations of their masculinity as lower than expected or even dissatisfying, but nonetheless non-threatening to more proximal elements of the self such as their self-esteem and gay identity. Again, further investigation is necessary to better investigate these potential relationships, given the nonsignificant findings of this study and its limitations.

To my knowledge, this study is also the first of its kind to utilize a simple gender affirmation exercise that aimed to prime attitudinal or psychological facets of gender, rather than performative or gender role facets (e.g., Prewitt-Freilino & Bosson, 2008). The utility of the exercises introduced in this study remains inconclusive. Per the manipulation check evaluations of these exercises, it does appear that these exercises invoke greater affect overall and positive affect specifically, and encourage descriptions of social and cognitive processes, including

insight, in greater proportion when compared against a control writing task. This is despite these gender affirmation exercises requiring no greater effort in terms of time to completion, word count, words used per sentence, use of punctuation, or number of unique dictionary words. Given the nonsignificance of the masculinity threat on outcome measures when participants engaged in a control writing task, it is unlikely that such affirmation exercises served much purpose in moderating the effects of such threats, and the interaction between these exercises and exposure to a masculinity threat was consistently nonsignificant. Further, these affirmation exercises failed to affect any of the outcomes in the absence of a masculinity threat, suggesting even at baseline that they served little purpose in affecting the moods, self-esteem, and internalized heterosexism of this sample. This is surprising, given the significant and positive relationship of these exercises to positive affect based on the LIWC 2015 analyses, but may be partially explained by the separation of the affirmation exercises and the outcome variables by the faux masculinity feedback stimuli. Though novel in their application, it is worth revisiting and perhaps retooling these exercises for more effective use with gay men, perhaps independent of a masculinity threat, while also considering their applicability to samples of heterosexual men for which the effects of masculinity threat have been consistently negative.

Limitations

This study provides further empirical investigation into gay men's responses to threatened masculinity, a line of research in relative infancy for gay men. Conclusions drawn from this sample and the ability to generalize must be considered with caution, due to characteristics of the sample (i.e., significant underrepresentation of men of color and transmen), its design and use of exploratory research questions, and the resultant non significant findings. It may be that the experimental nature of this study is not reflective of the ecological circumstances

under which gay men experience threats to their masculinity and encounter opportunities to restore their masculinity through compensatory behaviors. For example, it is commonly reported that gay men are often explicit in their preference for masculinity in potential partners when placing dating ads and may reject partners considered too effeminate in their presentation (Bailey, Kim, Hills, & Linesenmeier, 1997; Clarkson, 2006; Laner & Kamel; 1977; Lumby, 1978), though these preferences are less pronounced for those men who rate themselves as relatively feminine themselves. This may be one area in which a threat to masculinity produces negative affect and increased internalized heterosexism. Further, this study's reliance on explicit self-report measures may not accurately capture gay men's reactions to masculinity threat. For example, in their comparative study of gay and heterosexual men interacting with preschool children, Bosson, Haymoitz, and Pinel (2004) found that gay men exposed to a stereotype threat displayed greater non-verbal anxiety and a lower quality of care when working with children, though they did not explicitly report any greater anxiety. In their discussion of these findings, the researchers called for a greater utilization of indirect measures of stereotype threat outcomes, a recommendation that has been integrated into the masculinity threat literature with outcomes measures such as the force with which participants punched a punching bag (Bosson et al., 2009), how incomplete words were completed (Vandello, Bosson, Cohen, Burnaford, & Weaver, 2008), and salivary cortisol levels (Caswell, Bosson, Vandello, & Sellers, 2014) used as indirect indexes of reactions to masculinity threats. The self-report measures used in this study may not have adequately captured the effects of this study's experimental manipulations.

Another limitation involves the sampling method used to recruit gay men for this study. Though emerging research on masculinity threat in gay men has utilized online recruitment methods (Hunt, Fasoli, Cranaghi, & Cadinu, 2016), and indeed recruitment through such means

is one of few common ways to access an otherwise decentralized population (Mustanski, 2001; Riggle, Rostosky, & Reedy, 2005), it may bring into question the generalizability of results. For example, a study of lesbian women reported positive relationships between self-identifying as a lesbian and number of years out, the proportion of personal sexual experiences with women versus men, and involvement in lesbian community activities (Morris & Rothblum, 1999), suggesting that self-identifying as a lesbian is contingent on a number of factors. Though to what extent these findings generalize to sexual minority men is questionable, it may be that gay men recruited through their expressed interests in LGB issues on Facebook are more public with their sexual identities as compared to the national population of gay men. Further, research suggests that queer people of color may be less likely to be out to their families and religious communities (Moradi et al., 2010), and thus this subpopulation may not be adequately sampled by Facebook's interest algorithms that rely in-part on public "likes" in LGB+ interests, a finding that may explain their underrepresentation in this sample. These biases may be additionally compounded by selection bias of those gay men who chose to complete the study. These men in particular may be more mindful of societal stigma against gay men and therefore be more motivated to provide data that reflects positively on them (Bosson, Haymovitz, Pinel, 2003; Mustanski, 2001). Such bias may diminish any observable effects for masculinity threat on gay men. Additionally, while data provided by Koch and Emrey (2001) suggests that those LGB persons opting-in to web-based research do not differ demographically from those who do not "in any substantive manner," the use of Facebook's recruitment tools makes it virtually impossible to accurately measure a return rate and therefore to consider to what degree self-selection may bias the data provided.

This study and its findings may be further limited by its sample size ($N = 129$). An *a priori* analysis was conducted prior to the start of this study to calculate the total number of participants needed to achieve statistical power of .80 with a medium effect size ($f^2 = 0.15$) and an overall alpha-level of .05 for multiple linear regressions testing main effects and interaction terms. This returned a recommended sample of 92 participants, with a larger sample recruited to account for the number of planned tests. The effect sizes reported in Table 4, however, are notably small, suggesting an even larger sample would need to be recruited for tests of these effects to be significant, should these differences exist in reality. Interpretations of this study's nonsignificant findings must therefore be considered with this limitation in mind.

Implications for Research and Practice

The findings of this study have several important implications. Notably, this study was only the second of its kind to my knowledge to apply the masculinity threat experimental design to a sample of gay men. The first study of its kind observed only a minimal impact of masculinity threat on gay men's likelihood to interact with a masculine or feminine gay man (Hunt et. al, 2016), but failed to demonstrate any effects on their ratings of likeability and comfort interacting with these men. The current study also failed to demonstrate an effect of masculinity threat on gay men's affect, internalized heterosexism, and self-esteem. Though the actual stimuli used to elicit a masculinity threat varies across studies, the initial consistency between these studies of masculinity threat in gay men provides some evidence that gay men may respond to particular masculinity threats differently than their heterosexual counterparts. This is despite gay participants in the post-hoc follow-up to this study responding similarly to previously investigated heterosexual samples on the manipulation checks included. Given the relative infancy of this research literature, however, further investigations are needed to better

detail whether and how gay men respond differently to masculinity threats when compared to their heterosexual counterparts. For example, further research could examine these two groups comparatively, exposing both to masculinity threats or affirmations and assessing their reactivity on explicit and implicit measures of distress or engagement in compensatory behaviors (e.g., greater aggression toward a punching bag [Bosson et al., 2009]; greater amusement with sexist humor [O'Connor, Ford, & Banos, 2017]; distancing from feminine men [Hunt et al., 2016]; etc.).

The implications of this study are limited to the effects of a particular masculinity threat stimulus which may not reflect the ecological circumstances under which gay men routinely face threats to their masculinity. For example, it may be that public exposures of one's lower masculinity are more threatening to gay men, given the threat associated with being perceived as feminine and therefore perceived as gay (Blashill, & Powlishta, 2009; Fingerhut & Peplau, 2006; Mitchell & Ellis, 2013). Previous investigations in samples of heterosexual men have threatened their masculinity by having a researcher provide false feedback that they scored more similarly to women on a test of their handgrip strength (Cheryan, Schwartz Cameron, Katagiri, & Monin, 2015) or on their performance in solving logic puzzles (Stotzer & Shih, 2012), videotaping them while using feminine products such as scented lotions (Weaver, Vandello, & Bosson, 2013) or while braiding a doll's hair (Bosson, Vandello, Burnaford, Weaver, & Wasti, 2009), and simply providing false feedback similar to that of this study but in-person (Fowler, & Geers, 2017). Researchers may use similar public manipulations of masculinity threat in samples of gay men and compare results from these against those of more private evaluations such as those used in this study to better understand under which circumstances masculinity threats affect gay men and their well-being.

Research may also be conducted to more closely examine against which referent groups gay men might be compared in order to activate masculinity threat. In this study, the referent group for false feedback was simply "other men." Future research is needed to examine how gay men may react differently when such a referent group or the source of their gender evaluation is other gay men. For example, it is well-documented that gay men are often explicit in their desire for masculinity in partners, using common phrases such as "masc4masc," "no femmes," or "straight-acting only" in online dating profiles and messages to make clear such preferences in partners (Bailey, Kim, Hills, & Linesenmeier, 1997; Clarkson, 2006; Laner & Kamel; 1977; Lumby, 1978). These phrases and their use in rejecting gay men may better reflect those circumstances in which a masculinity threat would be especially distressing for gay men, given the threat this poses to them in meeting their romantic and sexual needs. Researchers may therefore prime gay men to recollect instances in which they felt they were romantically or sexually rejected or belittled for their level of masculinity to activate masculinity threat or experimentally manipulate these situations in lab simulations of dating profiles (e.g., Miller & Behm-Morawtiz, 2016). Further research is necessary to explore these situations and the effects they may have on gay men's well-being.

This study is one of few to explore how the effects of masculinity threat may be moderated by affirmation exercises specifically tailored to counter negative evaluations of one's gender or gender performance. As a rule, the extensive gender role conflict (see O'Neil, 2008 for a review) and precarious masculinity (see Vandello & Bosson, 2013 for a review) literatures offer profound insights into the effects of these issues on men's well-being but offer few tools for preventing or intervening to affect men's experience of gendered conflict. Empirically validated interventions may prove useful for clinicians working with men who struggle to resolve these

gendered issues. Further, such interventions may be uniquely appropriate for use with gay men, whose regular contact with stereotypes of gay men as less masculine may provide as much opportunity as liability for the development of a healthier gendered consciousness. For example, Riggle, Gonzalez, Rostosky, and Black (2014) tested the utility of an intervention aimed at improving LGBTQA identity among college students, which included a brief, 30-minute review of research on positive LGBTQA identity and tasked participants with reflecting positively on their LGBTQA identities. Results at post-test demonstrated an increase in positive LGBTQA identity, collective self-esteem, and individual self-esteem. Similar applications may be utilized with the affirmations included in this study and their use with gay men, who in addition to reflecting positively on their masculine and feminine qualities may be presented with positive research findings on the benefits of androgyny and examples of healthy "queer masculinities." Rather than emphasizing masculinity or femininity separately in these gender affirmation exercises, future iterations may instead focus on the importance of both considered together as an authentic and healthy expression of one's gender identity. This would be especially appropriate for use in a study of longitudinal design, which may more keenly and accurately reflect the circumstances under which gay men experience masculinity threat, how this affects their moods and internalization of heterosexism over time, and the opportunities for these gender affirmation exercises to be used as tools of prevention and intervention.

This study may also have implications for clinicians and other professionals working to support the well-being of gay men. As Riggle and colleagues (2008) note, the wealth of research literature on gay men has been couched in psychopathology and gay men's experiences of minority stress. Though such research serves an important purpose, it neglects to recognize the positive implications of gay identity, which is negatively implied in psychologists' overall lack

of training in affirmative service delivery for sexual minorities (Graham, Carney, & Kluck, 2012; Murphy, Rawlings, & Howe, 2002). This study and related findings may serve to counter deficit- or opposition-oriented narratives of gay male identity and instead promote a strengths-based perspective on this integration of identity (Lytle, Vaughan, Rodriguez, & Shmerler, 2014). Further, these findings may encourage clinicians working with gay men to explore the intersection of their sexual and gender identities more intentionally. Gay male clients struggling to reconcile their gay identity with the societal imperatives of their gender may be provided with the findings of this and related studies as a "possibility model" for integrating their sexual and gender identities. Similarly, clinicians may utilize this and other research on precarious masculinity to inform their clinical practice with gay clients, who though possibly less susceptible to masculinity threat, may still benefit from a clearer self-awareness of those circumstances under which they are triggered by threats to their gender and how their positive gay identity may serve to buffer against these effects.

Conclusion

This study serves as an extension of the limited research into gay men's relationship to masculinity and potential means for improving such a relationship. The nonsignificant findings of this study may themselves be informative, suggesting that previous empirical investigations into masculinity threat using samples of heterosexual men may be insufficient when considering the unique experiences of gay men and circumstances under which gendered threats affect their well-being. Limited in its relative infancy, the growing literature on gay men's experiences of masculinity offers a vision of this relationship that is complex and only vaguely understood. For gay men struggling to reconcile the societal imperatives of their gender with the gendered assumptions of their sexual identities, threats to masculinity invite a spectrum of responses, two

of which are of particular interest to this study: that gay men may strictly adhere to society's

masculine ideals and thereby restore their masculine identity, or that they may find flexibility

and perhaps greater authenticity in the androgyny denied to other men. Whether and when either

response is exemplified is no simple question; regardless, the findings of this study encourage a

deeper investigation into such lived experiences and their effects on the well-being of gay men.

Tables

Table 1. Demographic Characteristics for Total Sample ($N = 129$)

Variable	%	n
Race/Ethnicity		
African American	2.3	3
Asian American	2.3	3
Caucasian/European American	76.7	99
Latino/Hispanic	6.2	8
Native/Native American	2.3	3
Multi-ethnic/Multi-racial	5.4	7
Education		
Less than high school	.8	1
High school diploma/GED	6.2	8
Some college	27.9	36
Associate's degree	4.7	6
Bachelor's degree	26.4	34
Graduate degree	34.1	44
Socioeconomic Status		
Lower class	4.7	6
Working class	32.6	42
Middle class	38	49
Upper middle class	23.3	30
Upper class	1.6	2
Gender		
Cisman	99.2	128
Transman	.8	1

Note. Cumulative percentages may not equal 100% either due to rounding or missing data.

Table 2. Descriptive Statistics of Measures by Condition (*N* = 129**)**

Variable	*α*	Threat Condition	Exercise Condition			
			FAE	MAE	CWT	Total
IHNI-*abbr.*	.89	Threat	35.75 (11.78)	33.11 (12.22)	36.95 (17.98)	35.35 (13.76)
		No Threat	31.38 (9.12)	39.75 (19.21)	34.94 (12.98)	35.61 (14.98)
		Total	33.95 (10.89)	36.81 (16.65)	36.03 (15.70)	35.47 (14.30)
POS	.92	Threat	30.93 (9.85)	33.16 (8.66)	31.47 (8.26)	31.71 (9.02)
		No Threat	27.71 (8.71)	31.64 (8.14)	34.38 (6.77)	31.00 (8.32)
		Total	29.61 (9.44)	32.30 (8.31)	32.80 (7.65)	31.37 (8.67)
NEG	.84	Threat	13.43 (5.26)	13.32 (3.68)	15.74 (5.77)	14.04 (5.07)
		No Threat	15.67 (7.83)	15.25 (8.03)	15.56 (7.16)	15.55 (7.16)
		Total	14.35 (6.46)	14.40 (6.49)	15.80 (5.32)	14.76 (6.17)
RSES	.91	Threat	21.53 (5.09)	21.47 (6.13)	19.53 (4.46)	21.00 (5.24)
		No Threat	18.33 (6.38)	18.88 (6.82)	21.88 (5.84)	19.48 (6.48)
		Total	20.22 (5.82)	20.02 (6.58)	20.60 (5.20)	20.26 (5.89)

Note. Means included for each condition, standard deviations included in parentheses. IHNI-*abbr.* = Internalized Homonegativity Inventory, abbreviated to exclude the Morality of Homosexuality subscale; POS = Positive and Negative Affect Schedule, positive affect subscale; NEG = Positive and Negative Affect Schedule, negative affect subscale; RSES = Rosenberg Self-Esteem Scale.

Table 3. Bivariate Correlations Among Dependent Variables

Variable	1	2	3	4
1. IHNI-*abbr.*	--			
2. POS	-.13	--		
3. NEG	.24*	.05	--	
4. RSES	-.40*	.41*	-.43*	--

Note. IHNI-*abbr.* = Internalized Homonegativity Inventory, abbreviated to exclude the Morality

of Homosexuality subscale; POS = Positive and Negative Affect Schedule, positive affect

subscale; NEG = Positive and Negative Affect Schedule, negative affect subscale; RSES =

Rosenberg Self-Esteem Scale.

* = correlation is significant at $p < 0.01$.

Table 4. Summary of Multiple Linear Regressions on Dependent Variables

DV	Predictor variable		β*	t(127)	p	R^2	F(p)	ΔR^2	$\Delta F(p)$
IHNI-*abbr.*	Step 1					.01	.33 (.80)		
		Threat	.00	.012	.99				
		FAE	-.07	-.66	.51				
		MAE	.03	.24	.81				
	Step 2					.04	.92 (.47)	.03	1.80 (.17)
		Threat*FAE	.07	.37	.71				
		Threat*MAE	-.22	-1.32	.19				
RSES	Step 1					.02	.72 (.54)		
		Threat	.126	1.41	.16				
		FAE	1.30	-.35	.73				
		MAE	1.35	-.32	.75				
	Step 2					.04	1.49 (.20)	.04	2.60 (.08)
		Threat*FAE	.40	2.15	.03				
		Threat*MAE	.30	1.85	.07				
POS	Step 1					.03	1.33 (.27)		
		Threat	.06	.63	.53				
		FAE	-.18	-1.71	.09				
		MAE	-.02	-.21	.84				
	Step 2					.05	1.33 (.26)	.02	1.33 (.27)
		Threat*FAE	.30	1.61	.11				
		Threat*MAE	.18	1.13	.26				
NEG	Step 1					.03	1.13 (.34)		
		Threat	-.13	-1.42	.16				
		FAE	-.11	-1.02	.31				
		MAE	-.12	-1.11	.27				
	Step 2					.03	.80 (.55)	.00	.32 (.73)
		Threat*FAE	-2.10	-.764	.45				
		Threat*MAE	-1.80	-.634	.53				

Note. β* = standardized beta coefficient. IHNI-*abbr.* = Internalized Homonegativity Inventory, abbreviated to exclude the Morality of Homosexuality subscale; POS = Positive and Negative Affect Schedule, positive affect subscale; NEG = PANAS negative affect subscale; RSES = Rosenberg Self-Esteem Scale; FAE = femininity affirmation exercise; MAE = masculinity affirmation exercise.

Table 5. Summary of Manipulation Checks by Masculinity Threat Condition ($N = 84$)

	Threat (N = 45)		No Threat (N = 39)		t(82)	p	d
	M	SD	M	SD			
Masculinity Score Satisfaction	19.40	7.30	16.13	5.65	-2.27	.03	.50
Higher than expected	2.60	1.27	4.49	1.68	5.85	.00	1.27
Lower than expected	4.47	1.62	2.44	1.27	-6.32	.00	1.40
Accurate	4.18	1.85	4.72	1.52	1.45	.15	.32
Reflective	4.42	1.67	3.85	1.84	-1.50	.14	.34

Note. M = Mean. SD = Standard Deviation. *d* = Cohen's *d*, measure of effect size.

Table 6. Summary of Manipulation Checks by Writing Exercise Using the LIWC2015 ($N = 84$)

	Affirmation Exercise ($N = 52$)		Control Writing Task ($N = 32$)		$t(82)$	p	d
	M	SD	M	SD			
Overall word count	67.44	58.63	78.63	66.90	.80	.42	.18
Words per sentence	16.73	6.97	16.96	9.83	-.12	.91	.03
Unique dictionary words	91.00	6.99	87.46	9.78	-1.94	.06	.42
Overall punctuation count	10.15	5.52	12.16	7.19	1.44	.15	.31
Affect processes	9.44	7.87	.74	1.46	-6.17	.00*	1.54
Positive emotion	7.33	8.25	.69	1.37	-4.50	.00*	1.12
Social processes	8.45	6.27	3.19	4.61	-4.10	.00*	.96
Cognitive processes	11.87	6.46	4.70	7.82	-4.56	.00*	1.00
Insight	3.01	3.86	.65	2.13	-3.17	.00*	.76

Note. * = significant at p < .05. M = Mean. SD = Standard Deviation. d = Cohen's d, measure of effect size. Affect processes = percentage of words related to affect. Positive emotion = percentage of words that describe positive emotions; a subdictionary within affect. Social processes = percentage of words specific to interpersonal engagement. Cognitive processes = percentage of words specific to a number of higher-order cognitive processes, such as causation and differentiation. Insight = percentage of words specific to personal insight; a subdictionary within cognitive processes.

Appendix A
Informed Consent Form

Project Title	**Understanding Gay Men's Attitudes and Experiences**
Purpose of the Study	This research is being conducted by **Richard Q. Shin, Ph.D. and Collin Vernay, B.S./B.A.** at the University of Maryland, College Park. We are inviting you to participate in this research project because you are a man at least 18 years of age who identifies as gay, and you can provide a unique perspective on the issues assessed in the survey. You will be asked to complete a written exercise, to review the readability of personality test results, and to rate your attitudes regarding a number of aspects of personality, attitudes, and experiences. The purpose of this research project is therefore to explore how gay men vary in their understanding of themselves.
Procedures	The procedure involves completing a 10 to 15-minute confidential, one-time survey (responding to items such as "I take a positive attitude toward myself", "At times I think I am no good at all," and "I feel ashamed of my homosexuality") and providing background information such as age, race, etc. If you choose to participate in this study, you will be entered into a raffle for one of three $35 Amazon gift cards. The researchers may remove data that is determined to be false, fake, or provided without thoughtful consideration. A limited number of checks will be made throughout the survey to ensure that you are providing thoughtful and honest responses.
Potential Risks and Discomforts	There may be some risks to participating in this research study. It is possible that taking time away from other activities or answering questions about personal beliefs and attitudes may cause some distress while completing the questionnaire. There are <u>no</u> known physical or medical risks associated with participating in this research project. Should you experience any significant discomfort or distress, we invite you to explore some of the mental health resources available at the following online links or to call *1-800-273-TALK to be routed to a crisis center nearest you*: *https://www.mentalhealth.gov/* *https://www.nimh.nih.gov/health/find-help/index.shtml* *https://therapists.psychologytoday.com/* *http://locator.apa.org/* *https://findtreatment.samhsa.gov/*
Potential Benefits	This research is not designed to help you personally. However, a potential benefit of participating in this study is that you will be helping us further understand the factors affecting gay men's experiences. We are hopeful that the findings from the study will help us to better support needs specific to these men.

Confidentiality	To help protect your identity, no confidential information will be collected from you (e.g., your name), and any potentially identifiable information collected by Qualtrics, by the nature of its design, will be cleaned from the data before storage. If we write a report or article about this research project, your identity will be protected to the maximum extent possible as we will report results for the group – not a specific individual – so that no one will know the identity of any one study participant. The data will be retained for 10 years after the completion of the study, according to the University of Maryland policy on human subject files, and then will be destroyed. Your information may be shared with representatives of the University of Maryland, College Park or governmental authorities if you or someone else is in danger or if we are required to do so by law. For example, we are required to report situations in which a participant is at risk for self-harm or harm to others. There is a minimal risk that security of any online data may be breached since (1) the online host (Qualtrics survey software) has SAS 70 Certification and meets the rigorous privacy standards imposed on health care records by the Health Insurance Portability and Accountability Act (HIPAA; see http://www.qualtrics.com/security-statement for Qualtrics' data security statement), and (2) your data will be removed from the server soon after you complete the study, it is highly unlikely that a security breach of the online data will result in any adverse consequence for you. Your IP address (a numerical identification tied to your internet service provider) will not be known to the researchers, and will not be collected with your answers.
Compensation	If you choose to participate in this study, you will be entered into a raffle drawing for one of three $35 Amazon gift cards.
Right to Withdraw and Questions	Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify. If you are an employee or student at UMD, your employment status or academic standing at UMD will not be affected by your participation or non-participation in this study. If you decide to stop taking part in the study, if you have questions, concerns, or complaints, or if you need to report issues related to the research, please contact the investigator, Richard Q. Shin, Ph.D. at: 3234 Benjamin Building, University of Maryland, College Park, MD, 21046, (315) 530-5248, or rqshin@umd.edu.
Participant Rights	*If you have questions about your rights as a research participant or wish to report a research-related injury, please contact:*

	University of Maryland College Park Institutional Review Board Office 1204 Marie Mount Hall College Park, Maryland, 20742 E-mail: irb@umd.edu Telephone: 301-405-0678 *This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.*
Statement of Consent	Clicking on the "CONTINUE" button below indicates that you are at least 18 years of age; you have read this consent form or have had it read to you; your questions have been answered to your satisfaction and you voluntarily agree to participate in this research study. You may print a copy of this signed consent form. If you agree to participate, please click the button below.

Appendix B

Gender Affirmation Exercises

Control Exercise

We would like for you to spend some time describing how to get from one familiar location to another. For example, you may write about how to get from your house to your place of employment or a nearby mall or grocery store. Assume that you are writing to someone that is largely unfamiliar with the area that you will be describing, and use appropriate detail to instruct them from the starting place to the final location. However, we ask that you NOT use any major landmarks or street names in your description. We recognize that this will likely require a reasonable amount of thoughtfulness. There is no right or wrong answer to this exercise.

Masculinity Affirmation Exercise

We would like for you to choose THREE TO FIVE of the adjectives and descriptors listed below that seem personally relevant to your understanding of yourself. These may be ways that you or others have described you, even if only in specific situations or at certain times. We would like for you to spend some time writing about how these adjectives and descriptors are an important part of a particular activity, relationship, or area of your life that is improved because of them. For example, you may write about how your assertiveness, competitiveness, and self-reliance are central to your career success, or how your ambition, willingness to take risks, and forcefulness make you an attractive dating partner. There is no right or wrong answer to this exercise. We hope only that you will reflect on this in a meaningful way. Please select these adjectives and descriptors from those listed below, and write in the box provided below them.

Ambitious	Dominant
Bold	Forceful
Competitive	Strong
Courageous	Thick-skinned
Decisive	Willing to take risks

Femininity Affirmation Exercise

We would like for you to choose THREE TO FIVE of the adjectives and descriptors listed below that seem personally relevant to your understanding of yourself. These may be ways that you or others have described you, even if only in specific situations or at certain times. We would like for you to spend some time writing about how these adjectives and descriptors are an important part of a particular activity, relationship, or area of your life that is improved because of them. For example, you may write about how your tenderness, empathy, and interpersonal tact are central to your career success, or how your warmth, compassion, and openness with affection make you an attractive dating partner. There is no right or wrong answer to this exercise. We hope only that you will reflect on this in a meaningful way. Please select these adjectives and descriptors from those listed below, and write in the box provided below them.

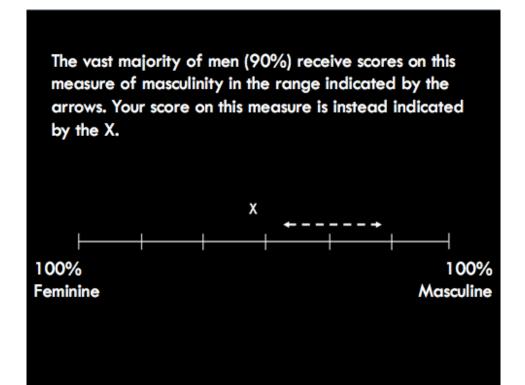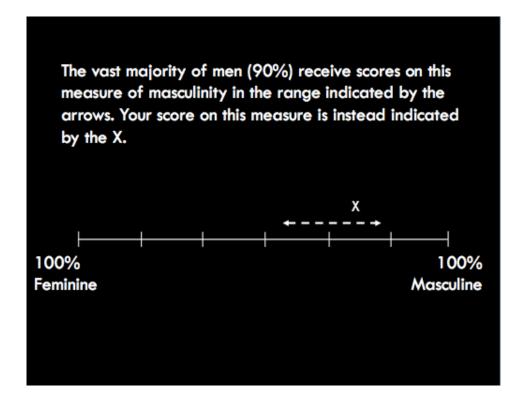|	
Affectionate	Nurturing
Compassionate	Patient
Emotionally-driven	Verbal/Talkative
Empathetic	Warm
Gentle/Tender	Willing to comprom

Appendix C

False Feedback Materials

Following completion of either the masculinity gender affirmation, femininity gender affirmation, or control writing exercise, participants will randomly be exposed to either a masculinity threat or affirmation. Prior to exposure, participants were shown an informational screen that read: "We are currently testing the readability of reports provided by a new survey tool. Based on the adjectives and descriptors you chose in the previous exercise, as well as a word-by-word analysis of your write-in response by a text analyzer embedded in our survey (borrowed from Lee, L., James, D., & Milton, R., 2016), we have developed an index masculinity score to determine how masculine you are relative to other men. The output produced on the following page will summarize these results. We ask that you please thoroughly review the information provided, as we will be requesting your feedback on the readability of this information at the conclusion of this survey." Following this and depending on the condition, participants were exposed to the false feedback materials presented on the following page (borrowed from Hunt, Fasoli, Garnaghi, & Cadinu, 2016).

Masculinity Threatened Condition

The vast majority of men (90%) receive scores on this measure of masculinity in the range indicated by the arrows. Your score on this measure is instead indicated by the X.

X

←– – – – –→

100%
Feminine

100%
Masculine

Control Condition

The vast majority of men (90%) receive scores on this measure of masculinity in the range indicated by the arrows. Your score on this measure is instead indicated by the X.

X

←– – – – –→

100%
Feminine

100%
Masculine

Appendix D

Demographic Form

Instructions: This section of the survey includes some standard demographic questions. We will

not focus on your individual responses. Instead, we combine your responses with everyone else's

to summarize the people who completed the survey (e.g., average age of survey takers).

What is your gender identity? Please note
that in these answers "cis", short for
"cisgender", denotes or relates to a person
whose sense of personal identity and gender
corresponds with the sex or gender they
were assigned at birth.
  o Cis man
  o Cis woman
  o Trans man
  o Trans woman
  o Gender non-binary
  o Questioning
  o None of the above options accurately
    describe my gender. I describe my
    gender identity as:

    _____

Please write-in your age (in years): _____

What is your race/ethnicity?
  o African American
  o Asian American
  o Caucasian/European American
  o Latino/Hispanic
  o Native/Native American
  o Multi-ethnic/Multi-racial
  o Other race/ethnicity not listed above
    (please specify):

    _____

What is your US citizenship status?
  o U.S. Citizen
  o U.S. Permanent Resident
  o Other citizenship status not listed
    above (please specify):

    _____

Please list your state of residence: _____

What is the highest level of education you
have completed?
  o Less than high school
  o High school/GED
  o Some college
  o Associates degree
  o Bachelors degree
  o Graduate degree

What is your political identity?
  o Very conservative
  o Conservative
  o Moderately conservative
  o Moderate
  o Moderately liberal
  o Liberal
  o Very liberal
  o Other political identity not listed
    above (please specify):

    _____

What socioeconomic class have you spent the majority of your life in?
- o Lower class
- o Working class
- o Middle class
- o Upper middle class
- o Upper class

What is your religion/spiritual tradition?
- o Agnostic
- o Buddhist
- o Hindu
- o Mormon/Latter-Day Saints
- o Protestant
- o Atheist
- o Catholic
- o Jewish
- o Muslim
- o Unitarian Universality

- o No religious affiliation
- o Other religion/spiritual tradition not listed above (please specify): _____

What is your sexual identity/orientation?
- o Bisexual
- o Gay
- o Heterosexual
- o Questioning
- o None of the above options accurately describe my sexual identity/orientation. I describe my sexual identity/orientation as: _____

Do you consider yourself as someone with a disability? If so, please specify: _____

Appendix E

Positive and Negative Affect Schedule (PANAS)

Instructions: This scale consists of a number of words and phrases that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you have feel this way right now. Use the following scale to record your answers.

	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
Interested	○	○	○	○	○
Distressed	○	○	○	○	○
Excited	○	○	○	○	○
Upset	○	○	○	○	○
Strong	○	○	○	○	○
Guilty	○	○	○	○	○
Scared	○	○	○	○	○
Hostile	○	○	○	○	○
Enthusiastic	○	○	○	○	○
Proud	○	○	○	○	○
Irritable	○	○	○	○	○
Alert	○	○	○	○	○
Ashamed	○	○	○	○	○
Inspired	○	○	○	○	○
Nervous	○	○	○	○	○
Determined	○	○	○	○	○
Attentive	○	○	○	○	○
Jittery	○	○	○	○	○
Active	○	○	○	○	○
Afraid	○	○	○	○	○

Appendix F

Internalized Homonegativity Inventory (IHNI)

Instructions: The following statements deal with emotions and thoughts related to being gay.

Using the scale below, please give your honest rating about the degree to which you agree or

disagree with each statement.

	Strongly disagree	Moderately disagree	Slightly disagree	Slightly agree	Moderately agree	Strongly agree
I believe being gay is an important part of me.	○	○	○	○	○	○
I believe it is OK for men to be attracted to other men in an emotional way, but it's not OK for them to have sex with each other.*	○	○	○	○	○	○
When I think of my homosexuality, I feel depressed.	○	○	○	○	○	○
I believe that it is morally wrong for men to have sex with other men.*	○	○	○	○	○	○
I feel ashamed of my homosexuality.	○	○	○	○	○	○
I am thankful for my sexual orientation.	○	○	○	○	○	○
When I think about my attraction towards men, I feel unhappy.	○	○	○	○	○	○
I believe that more gay men should be shown in TV shows, movies, and commercials.	○	○	○	○	○	○
I see my homosexuality as a gift.	○	○	○	○	○	○
When people around me talk about homosexuality, I get nervous.	○	○	○	○	○	○

I wish I could control my feelings of attraction toward other men.	○	○	○	○	○	○
In general, I believe that homosexuality is as fulfilling as heterosexuality.	○	○	○	○	○	○
I am disturbed when people can tell I'm gay.	○	○	○	○	○	○
In general, I believe that gay men are more immoral than straight men.*	○	○	○	○	○	○
Sometimes I get upset when I think about being attracted to men.	○	○	○	○	○	○
In my opinion, homosexuality is harmful to the order of society.*	○	○	○	○	○	○
Sometimes I feel that I might be better off dead than gay.	○	○	○	○	○	○
I sometimes resent my sexual orientation.	○	○	○	○	○	○
I believe it is morally wrong for men to be attracted to each other.*	○	○	○	○	○	○
I sometimes feel that my homosexuality is embarrassing.	○	○	○	○	○	○
I am proud to be gay.	○	○	○	○	○	○
I believe that public schools should teach that homosexuality is normal.	○	○	○	○	○	○
I believe it is unfair that I am attracted to men instead of women.	○	○	○	○	○	○

Note: * = items included in the Morality of Homosexuality subscale and therefore not included in this study.

Appendix G

Rosenberg Self-Esteem Scale (RSES)

Instructions: Below is a list of statements dealing with your general feelings about yourself.

Please indicate how strongly you agree or disagree with each statement.

	Strongly agree	Agree	Disagree	Strongly disagree
On the whole, I am satisfied with myself.	○	○	○	○
At times I think I am no good at all.	○	○	○	○
I feel that I have a number of good qualities.	○	○	○	○
I am able to do things as well as most other people.	○	○	○	○
I feel I do not have much to be proud of.	○	○	○	○
I certainly feel useless at times.	○	○	○	○
I feel that I'm a person of worth, at least on an equal plane with others.	○	○	○	○
I wish I could have more respect for myself.	○	○	○	○
All in all, I am inclined to feel that I am a failure.	○	○	○	○
I take a positive attitude toward myself.	○	○	○	○

Appendix H

Study Debriefing

At this time, we would like to inform you of the true nature of this study, which was intentionally disguised at its start. We apologize for providing you with incomplete information at the beginning of this experiment but believe it essential to the integrity of the study design, the data we collect, and the conclusions we make regarding our findings.

This study is concerned with the effects of threats to gay men's masculinity on their self-esteem, affect (or mood), and feelings about their sexual orientation/identity, as well as the potential for gender affirmation exercises of either masculinity or femininity to protect against negative effects. Previous studies have found that threats to men's masculinity may have negative implications for their mental well-being, but little research has examined the potential for affirmation exercises to protect against these effects. In particular, current research suggests that gay men's negative attitudes toward their sexual orientations may be due in-large part to personally held beliefs that they do not live up to the societal expectations of men, making this study all the more imperative.

How was this tested?
In this study, you were randomly asked to engage in one of three writing tasks. You may have been asked to select three to five adjectives or descriptors that were traditionally masculine and to write about how these positively affect your life (a gender affirmation of your masculinity) or to three to five adjectives or descriptors that were traditionally feminine and to write about these instead (a gender affirmation of your femininity). You may otherwise have been asked to engage in a control writing task, where you were asked to provide directions from one landmark to another. All participants performed one of these three tasks. You were then asked to review feedback from a fake personality test, with a black imagine with white dotted lines and an X representing your score. Participants randomly received feedback that they were either as masculine as 90% of a faux sample or less masculine than this 90%. This was administered completely at random and **is not** reflective of your actual masculinity relative to other men.

Why is this important to study?
Men struggle with feeling less masculine than other men, and the implications of this relationship are far-reaching. Gender role conflict, or feeling like a failure as a man, has been associated with a number of negative mental health outcomes, as well as a number of negative interpersonal implications. Additionally, an immediate threat to men's masculinity may result in compensatory behaviors that threaten their relationships and the well-being of others. For gay men in particular, this may have serious negative implications for their mental wellness and feelings about their sexual orientation/identity.
The information collected in this study will be used to inform the further use of our gender affirmation exercises, particularly in terms of their effectiveness in preventing against the effects of masculinity threat. Further investigations will apply these affirmations with use for gay men in the treatment of internalized heterosexism, or personal shame around their gay identities.

What if I want to know more?
If you are interested in learning more about the problems men (and gay men specifically) encounter as a result of gender role conflict, you may want to consult:

O'Neil, J. M. (2008). Summarizing 25 years of research on men's gender role conflict using the Gender Role Conflict Scale: New research paradigms and clinical implications. The Counseling Psychologist, 36(3), 358-445. doi:10.1177/0011000008317057

Szymanski, D. M., & Carr, E. R. (2008). The roles of gender role conflict and internalized heterosexism in gay and bisexual men's psychological distress: Testing two mediation models. Psychology of Men & Masculinity, 9(1), 40-54. doi:10.1037/1524-9220.9.1.40

If you have concerns about your rights as a participant in this experiment, please contact the University of Maryland IRB at (301) 405-4212 or irb@umd.edu. If you would like to have your data removed from this study or have further questions and/or concerns, please contact Collin Vernay at collinvernay@gmail.com. You may also save this page or request a copy of it from Collin Vernay at collinvernay@gmail.com.
Thank you again for your participation.

Appendix I

Manipulation Check Items

Instructions: We'd like to know more about your reactions to our survey tool and your masculinity index score. Please respond to each of the following items by indicating the extent to which you agree or disagree with each statement (from *strongly disagree* to *strongly agree*).

	1	2	3	4	5	6	7
1. I feel good about myself after seeing my masculinity score	❍	❍	❍	❍	❍	❍	❍
2. Seeing my masculinity score was a fun experience	❍	❍	❍	❍	❍	❍	❍
3. I am disappointed in my masculinity score	❍	❍	❍	❍	❍	❍	❍
4. My masculinity score put me in a good mood	❍	❍	❍	❍	❍	❍	❍
5. I feel kind of down after seeing my masculinity score	❍	❍	❍	❍	❍	❍	❍
6. I am pleased with my masculinity score	❍	❍	❍	❍	❍	❍	❍
7. I feel that my results accurately reflect me as a person	❍	❍	❍	❍	❍	❍	❍
8. My results do not reflect how I see myself	❍	❍	❍	❍	❍	❍	❍
9. My masculinity score was higher than expected	❍	❍	❍	❍	❍	❍	❍
10. My masculinity score was lower than expected	❍	❍	❍	❍	❍	❍	❍

Note: items were displayed on a 7-point Likert scale, with labels for "strongly disagree," "disagree," "somewhat disagree," "neither agree nor disagree," "somewhat agree," "agree," and "strongly agree." These are not included here for readability of the item table.

Items 1 – 6 were summed to produce a single feedback dissatisfaction score, with Items 3 and 5 reverse-coded.

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