

ANTI-TRANSGENDER PREJUDICE: A STRUCTURAL EQUATION MODEL OF
ASSOCIATED CONSTRUCTS

By

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To all those who have nurtured my growth, passion, and curiosity and who have helped me find
and develop my voice

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This study examined the unique relations of a number of theoretically relevant constructs with anti-transgender prejudice. Specifically, structural equation modeling was used to test the unique relations of anti-lesbian, gay, and bisexual (LGB) prejudice, traditional gender role attitudes, need for closure, social dominance orientation, and aggression. Social desirability was controlled as a covariate in the model. Analyses of data from 250 undergraduate students indicated that anti-LGB prejudice and traditional gender role attitudes each had positive unique relations with anti-transgender prejudice beyond the negative association with social desirability. By contrast, need for closure and social dominance orientation were not associated uniquely with anti-transgender prejudice. Aggression proneness yielded a unique negative relation which was the result of a social desirability suppressor effect. Additional analyses indicated that women reported lower average anti-transgender prejudice than men, but the pattern of relations between the predictor variables and anti-transgender prejudice did not differ between women and men. A confirmatory factor analysis also supported the unidimensional structure of a measure of anti-transgender prejudice.

CHAPTER 1 INTRODUCTION

Transgender individuals report widespread exposure to prejudice (Clements-Nolle, Marx & Katz, 2006; Lombardi, Wilchins, Priesing & Malouf, 2001; Stotzer, 2008). For instance, a recent national report documenting the experiences of 6,450 transgender and gender nonconforming respondents revealed that 47% reported an adverse job outcome, 29% reported police disrespect or harassment, and 15% of students in either K-12 or higher education left their school as a result of severe harassment (Grant et al., 2011). Furthermore, some scholars have postulated that anti-transgender prejudice may be important in understanding psychological distress and high rates of suicidality among transgender individuals (Clements-Nolle, Marx & Katz, 2006; Bockting, Huang, Ding, Robinson & Rosser, 2005). Thus, understanding and reducing anti-transgender prejudice has important public health and social justice implications.

However, research on societal attitudes toward transgender people is only in its early stages. Specifically, a few studies have sought to develop measures to assess anti-transgender prejudice (e.g., Hill & Willoughby, 2005; Nagoshi, Adams, Terrell, Hill, Brzuzy & Nagoshi, 2008) and these measures have been used in subsequent studies to compare the extent to which different groups (e.g., men, women, parents, undergraduate students) report anti-transgender prejudice (e.g., Gerhardstein & Anderson, 2010; Hill, Menvielle, Sica & Johnson, 2010). An important next step in advancing the understanding of anti-transgender prejudice is to elucidate the constellation of theoretically relevant constructs that are associated with such prejudice. Identifying key correlates of anti-transgender prejudice can locate such prejudice within larger frameworks of prejudicial attitudes and also reveal correlates that may be fruitful targets for psychoeducational and social justice interventions aiming to reduce anti-transgender prejudice and its harm to transgender communities.

The present study addresses these needs by using structural equation modeling to evaluate the associations of multiple theoretically relevant constructs with anti-transgender prejudice. In particular, on the basis of the proceeding review of the literature, this study evaluates the associations of anti-transgender prejudice with sexual orientation- and gender role-specific attitudes (i.e., anti-lesbian, -gay, and -bisexual prejudice, traditional gender role attitudes) as well as with broader correlates of prejudicial attitudes and dispositions (i.e., need for closure, social dominance orientation, aggression). In light of the potential role of socially desirable responding in assessing these attitudes, social desirability is also included in the model. Furthermore, based on potential variability in anti-transgender prejudice across women and men (e.g., Hill & Willoughby, 2005; Nagoshi et al., 2008), patterns of hypothesized relations are compared across women and men. As such, the findings of this study can inform theoretical understanding of anti-transgender prejudice and point to a cluster of correlates that may be fruitful targets of interventions to reduce anti-transgender prejudice.

Conceptual Definitions and Empirical Findings

Hill and Willoughby (2005) defined transphobia as “an emotional disgust toward transgender individuals who do not conform to society’s gender expectations” (p. 533) and as revulsion to gender nonconforming persons, or “masculine women, feminine men, cross-dressers, transgenderists and/or transsexuals” (p. 533). Though the term “transphobia” has been used to discuss the construct of anti-transgender prejudice in past research (e.g., Hill & Willoughby, Nagoshi, Adams, Terrell, Hill, Brzuzy, & Nagoshi, 2008), for the purposes of this study, we use the phrase “anti-transgender prejudice” to acknowledge the prejudicial attitudes (rather than fear or phobia) that comprise this construct. We are aware of two research programs that have focused on operationalizing anti-transgender prejudice (Hill & Willoughby, 2005;

Nagoshi et al., 2008). These studies provide the groundwork for empirical examination of theoretically relevant correlates of anti-transgender prejudice.

One demonstrated correlate of anti-transgender prejudice is anti-lesbian and gay prejudice. Across studies, anti-transgender prejudice is shown to correlate positively with anti-lesbian and gay prejudice (r s in the .30 to .60 range; Hill & Willoughby, 2005; Nagoshi et al., 2008). These correlations may reflect the perception of lesbian, gay, and transgender people as a collective gender-transgressive outgroup (e.g., Fassinger & Arseneau, 2007); that is, a group of people that by virtue of their sexual orientation or gender identities and presentations are perceived as violating societal norms of masculinity and femininity. This fusion of groups is also reflected in scientific discourses where sexual orientation and gender identity and presentation issues are frequently discussed together (e.g., Fassinger & Arseneau, 2007; Moradi, Mohr, Worthington, & Fassinger, 2009). Thus, from a conceptual and empirical standpoint, the association between anti-transgender prejudice and anti-lesbian and gay prejudice may reflect a perceived overlap (or conflation) of sexual orientation with gender identities and presentations that contradict sex-typed gender role prescriptions (Fassinger & Arseneau, 2007).

While prior research links anti-transgender prejudice with anti-lesbian and gay prejudice, this research has not included anti-bisexual prejudice when examining these relations. Large correlations observed between anti-bisexual prejudice and anti-lesbian and gay prejudice (e.g., Mohr & Rochlen, 1999) suggest that anti-bisexual prejudice would be correlated with anti-transgender prejudice. Moreover, anti-bisexual prejudice may be particularly important to include from a conceptual standpoint. Specifically, Mohr and Rochlen (1999) suggested that negative attitudes toward bisexuality arise from the characterization of bisexuality as transitory and illegitimate. Such characterizations have been posited to reflect dichotomous notions of

sexual orientation which are rooted in dichotomous notions of sex and gender (Dodge, Reece, & Gebhard, 2008). In other words, a binary view of sex and gender – female/woman or male/man – is central to a binary view of sexual orientation – gay/same-sex oriented or heterosexual/other-sex oriented. Bisexuality may be a target of prejudice because it challenges these binaries (Brewster & Moradi, 2010; Mohr & Rochlen, 1999). In much the same way, transgender identities challenge binary views of gender and sexual orientation. Thus, it seems important to examine the conceptually relevant role of anti-bisexual prejudice along with anti-lesbian and gay prejudice in relation to anti-transgender prejudice.

The preceding line of reasoning – that anti-lesbian, gay, bisexual, and transgender prejudice would be correlated in part because these target groups are perceived to violate gender binaries – points to traditional gender role attitudes as another conceptually important correlate of anti-transgender prejudice. Indeed, a key correlate of anti-gay, lesbian, and bisexual prejudice is endorsement of traditional gender role attitudes (e.g., Goodman & Moradi, 2008; Keiller, 2010; Herek, 2002). Moreover, scholars have argued that traditional gender role beliefs are the basis of anti-transgender prejudice (e.g., Lombardi, 2009; Nadal, Rivera & Corpus, 2010). Despite this theorized centrality of traditional gender role attitudes to anti-transgender prejudice, empirical data on the relationship between these two variables has been limited. Specifically, in one study, sexist attitudes, which are related to but not the same as traditional gender role attitudes (Whitley, 2001), were shown to correlate positively and uniquely with anti-transgender attitudes above and beyond the association of anti-lesbian and gay prejudice (Nagoshi et al., 2008). In the only study that examined the link between anti-transgender prejudice and traditional gender role attitudes directly, Hill and Willoughby (2005) found positive zero-order correlations between the two variables ($r = .39$ and $.65$ in two separate samples); but, the extent

to which these correlations reflected shared variance above and beyond the known link of anti-lesbian and gay attitudes was not examined. Such an examination is important for clarifying whether traditional gender roles and anti-lesbian and gay prejudice explain unique aspects of anti-transgender prejudice.

Beyond the posited roles of sexual orientation- and gender role-specific attitudes in anti-transgender prejudice, other broader individual difference variables may also be important correlates of anti-transgender prejudice. For example, Nagoshi et al. (2008) found that some of the key correlates of anti-lesbian and gay prejudice – such as right-wing authoritarianism and religious fundamentalism – are also related to anti-transgender prejudice. Beyond these previously examined variables, additional literature points to several other individual difference variables that are conceptually important to examine as correlates of anti-transgender prejudice: need for closure, social dominance orientation, and aggression-proneness. These constructs have been linked with anti-lesbian, gay, or bisexual prejudice and, as discussed below, are also relevant to anti-transgender prejudice from a theoretical standpoint.

Need for closure is defined as a person's desire for order, structure and nonambiguity (Webster & Kruglanski, 1994). More specifically, persons who possess a high need for closure are motivated to avoid states of uncertainty (Kruglanski, 1990). As a result, they may be more likely to react negatively to individuals who represent some degree of ambiguity, as this threatens their ability to attain cognitive closure. Thus, individuals with a high need for closure would be expected to have negative attitudes toward groups that expand the boundaries (or fall outside) of existing norms. Indeed, need for closure and the associated construct of intolerance for ambiguity have been linked positively with anti-lesbian, gay, and bisexual (LGB) prejudice (Haslam, Rothschild, & Ernst, 2002; Mohr & Rochlen, 1999). Just as lesbian, gay, and bisexual

individuals challenge norms of heterosexuality and gender traditionality, so too do transgender individuals challenge binary notions of sexual orientation and gender identity. Therefore, individual differences on need for closure may be a conceptually important correlate of anti-transgender prejudice.

Social dominance orientation is another individual difference variable that has been linked with anti-lesbian and gay prejudice. Social dominance orientation is defined as “the extent to which one desires one’s in-group to dominate and be superior to out-groups” (Pratto, Sidanius, Stallworth & Malle, 1994; p. 742). Therefore, social dominance orientation represents the degree to which individuals desire to maintain social hierarchies. As such, researchers have postulated that due to the lower sociopolitical status of women and gay and lesbian individuals in this society, persons high on social dominance orientation are more likely to hold negative attitudes toward these groups (Pratto et al., 2004; Whitley & Lee, 2000). Indeed, social dominance orientation has been shown to be associated with greater anti-lesbian and gay prejudice (Whitley & Ægisdóttir, 2000), and sexist attitudes toward women (Pratto et al., 2004). Similarly, transgender individuals are members of a stigmatized population that is relegated to a lower social status in the United States. As such, social dominance orientation may be expected to relate positively to anti-transgender prejudice.

Finally, aggression proneness is an individual differences variable that has also been considered important to explore as a correlate of prejudice toward sexual minority populations. Results have been mixed, however, regarding the link of aggression proneness with prejudice toward LGB groups (e.g., Adams, Wright & Lohr, 1996; Bernat, Calhoun, Adams & Zeichner, 2001; Parrott & Zeichner, 2005). In the only study that examined the association of aggression proneness with anti-transgender prejudice, Nagoshi et al. (2008) found some positive

correlations between dimensions of aggression proneness (e.g., physical, verbal) and anti-transgender prejudice. However, these correlations were significant among men but not among women and the associations were nonsignificant once anti-lesbian and gay prejudice was accounted for. One important caveat to these findings is that self-reported aggression proneness is shown to be associated with socially desirable responding (Harris, 1997; Dyer, Bell, McCann & Rauch, 2006; Dyer et al., 2009). Therefore, controlling for social desirability seems an important step in clarifying the relationship between aggression proneness and anti-transgender prejudice.

Another important consideration in exploring the correlates of anti-transgender prejudice is that some gender differences in level of anti-transgender prejudice have been observed, with men reporting more negative attitudes than women (Hill & Willoughby, 2005; Nagoshi et al., 2008). But, it is not clear whether the pattern of correlations between anti-transgender prejudice and other constructs differs by gender group. The parallel body of research on anti-LGB attitudes suggests gender differences in levels of anti-LGB prejudice (e.g., Herek, 1988; Herek, 2002; Mohr & Rochlen, 1999; Whitley & Ægisdóttir, 2000) but not in the relationships between such prejudice and other constructs (e.g., Goodman & Moradi, 2008). Thus, it seems important to attend to potential gender differences in the present study.

Present Study and Hypotheses

The present study advances research on anti-transgender prejudice by evaluating the associations of anti-transgender prejudice with sexual orientation- and gender role-specific attitudes as well as with broader correlates of prejudicial attitudes and dispositions. Specifically, this study uses structural equation modeling to test the unique relations of anti-LGB prejudice, traditional gender role attitudes, need for closure, social dominance orientation, and aggression proneness with anti-transgender prejudice. Each of these variables is hypothesized to

be associated positively with anti-transgender prejudice; but, prior empirical and conceptual literature suggests a pattern of stronger relations for sexual orientation- and gender-specific correlates (i.e., anti-LGB prejudice, traditional gender role attitudes) than for the broader individual difference variables (i.e., need for closure, social dominance orientation, aggression). In light of the potential role of socially desirable responding in assessing these attitudes, social desirability is also included in the model so that the hypothesized relations are tested above and beyond the role of such response tendencies. Finally, patterns of hypothesized relations are compared across women and men in order to explore potential variability across these groups (e.g., Hill & Willoughby, 2005; Nagoshi et al., 2008).

As a preliminary step to testing the aforementioned hypotheses, we use confirmatory factor analysis (CFA) to evaluate the proposed unidimensional structure of anti-transgender prejudice as operationalized by Nagoshi and colleagues' (2008) Transphobia Scale. Nagoshi et al. (2008) obtained a unidimensional structure using exploratory factor analysis of data from an undergraduate student sample, but the replicability of this structure has not been examined in an independent sample. Thus, the present CFA adds to psychometric data regarding measurement of anti-transgender prejudice.

CHAPTER 2 INSTRUMENTS AND METHODS

Participants

Data from 250 undergraduate students enrolled in an introductory psychology course were analyzed in this study. Participants ranged in age from 18 to 26 ($M = 19.06$, $SD = 0.99$, $Mdn = 19$). Among the participants, 58% identified as female and 42% identified as male. In terms of race or ethnicity, 90% of participants identified as White or Caucasian, 4% as Black or African American, 4% as Hispanic, 2% as Asian or Pacific Islander, and less than 1% as American Indian. Finally, 99% of participants identified as straight or heterosexual, less than 1% identified as questioning, and less than 1% as bisexual.

Instruments

Anti-transgender attitudes

The nine-item Transphobia Scale (TS; Nagoshi et al. 2008) measures prejudicial attitudes towards individuals who present differently from socially expected gender roles and identities. Items are rated on a 7-point scale ranging from 1 = *completely disagree* to 7 = *completely agree*. A sample item is “I believe that a person can never change their gender.” Item ratings were averaged, with higher scores indicating more prejudicial attitudes. In terms of reliability, Cronbach’s alpha for responses to TS items was .82 in Nagoshi and colleagues’ (2008) sample of undergraduate students. Validity has been demonstrated with undergraduate student samples through the independence of TS scores from instrumentality and expressiveness and through positive correlations with religious fundamentalism and right-wing authoritarianism (Nagoshi et al., 2008). In this study, Cronbach’s alpha for responses to TS items was .84.

Anti-lesbian, Gay, and Bisexual Attitudes

This construct was measured using the Attitudes toward Lesbians and Gay Men Scale (ATLG; Herek, 1988) and the Attitudes regarding Bisexuality Scale (ARBS; Mohr & Rochlen, 1999). The Attitudes toward Lesbians and Gay Men (ATLG; Herek, 1988) scale is a commonly used measure of anti-lesbian and gay prejudice. The ATLG has 20 items: 10 items comprise the Attitudes toward Lesbians (ATL) subscale, and 10 items comprise the Attitudes toward Gay men (ATG) subscale. Items are rated on a 9-point scale ranging from 1 = *strongly disagree* to 9 = *strongly agree*. A sample item is “Lesbians just can’t fit into our society.” Appropriate items were reverse scored, and item ratings were averaged, with higher scores reflecting more prejudicial attitudes. In terms of reliability, Cronbach’s alphas were .77 for ATL items and .89 for ATG items in a sample of college students (Herek, 1988). Validity of ATLG scores has been demonstrated through positive correlations with theoretically related constructs such as dogmatism, sexism, religious fundamentalism, and negative correlations with contact with lesbian and gay persons (Herek, 1988). In this study, Cronbach’s alphas were .94 for responses to ATL items and .96 for responses to ATG items.

The Attitudes regarding Bisexuality Scale – Female/Male Version (ARBS-FM; Mohr & Rochlen, 1999) is a measure of attitudes toward bisexual women and men on two dimensions: tolerance and stability. Tolerance relates to an individual’s conceptualization of bisexuality as a “moral, tolerable sexual orientation” (p. 365). Stability reflects views of the legitimacy and stability of bisexuality as an identity label and of the emotional and romantic stability of bisexual persons themselves. Mohr and Rochlen (1999) also developed the ARBS-F and ARBS-M, two independent measures of attitudes toward bisexual women and attitudes toward bisexual men, though these measures are comprised of a greater number of items, paralleling each other perfectly except in gender-specified in each item. Therefore, as we are interested in examining

the relation of anti-bisexual prejudice as a whole to anti-transgender prejudice, we used their shorter combined form, the ARBS-FM to examine anti-bisexual prejudice as a whole. The ARBS-FM has 18 items: 10 items assess stability and 8 items assess tolerance. Items are rated on a 5-point scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. A sample item is “Male bisexuals are afraid to commit to one lifestyle.” Appropriate items were reverse scored, and item ratings are averaged to produce subscale scores, with higher scores indicative of more negative attitudes. In terms of reliability, Cronbach’s alphas were .88 for responses to items on the Tolerance subscale, and .91 for responses to items on the Stability subscale in a sample of heterosexual undergraduate students (Mohr & Rochlen, 1999). In nonstudent samples of lesbian, gay, and heterosexual participants and in undergraduate samples of mostly or exclusively heterosexual participants, validity of ARBS-FM scores has been demonstrated through positive correlations with theoretically related constructs such as anti-lesbian and gay prejudice and need for cognitive closure (Mohr & Rochlen, 1999). In this study, Cronbach’s alphas were .88 for responses to Stability items and .91 for responses to Tolerance items.

Traditional Gender Role Attitudes

This construct was measured using the Attitudes Toward Women Scale (AWS; Spence & Helmreich, 1978) and the Gender Role Beliefs Scale (GRBS; Kerr & Holden, 1999). The Attitudes toward Women Scale (AWS; Spence & Helmreich, 1978) is a short-form measure of attitudes toward appropriate role behaviors for women relative to men. The AWS consists of 15 items rated on a 4-point scale ranging from 0 = *agree strongly* to 3 = *disagree strongly*. A sample item is “Women earning as much as their dates should bear equally the expense when they go out together.” Appropriate items were reverse scored and item ratings were averaged. For interpretive clarity, we coded AWS items such that higher scores indicate more traditional gender role attitudes. In terms of reliability, Cronbach’s alphas have ranged from .80 to .89 for

responses to AWS items across samples (Spence & Helmreich, 1978; Spence & Hahn, 1997). Evidence for validity has been demonstrated through positive correlations of AWS scores with endorsement of feminine gender norms (Liss, Erchull & Ramsey, 2010). In the present study, Cronbach's alpha was .86 for responses to AWS items.

The Gender Role Beliefs Scale (GBRS; Kerr & Holden, 1996) is a measure of beliefs about appropriate behaviors for women and men. The GRBS has 20 items rated on a 7-point scale ranging from 1 = *strongly agree* to 7 = *strongly disagree*. A sample item is "It bothers me more to see a woman who is pushy than a man who is pushy." Appropriate items were reverse scored, and item ratings were averaged. For interpretive clarity, in this study item ratings were coded such that higher scores indicate more traditional gender role beliefs. In terms of reliability, Cronbach's alpha was .89 for responses to GRBS items in samples of non-college women and college women and men (Kerr & Holden, 1996). With regards to validity, Kerr and Holden demonstrated theoretically consistent differences in GRBS scores between college students, women in feminist organizations, and women in a not-specifically feminist organization (i.e., female volunteers), with feminist women reporting lower adherence to traditional gender role beliefs than the other two groups. Cronbach's alpha for responses to GRBS items in the present study was .87.

Need for Closure

The Need for Closure Scale (NFCS; Webster & Kruglanski, 1994) is a measure of persons' desire for order, structure and nonambiguity. The NFCS has 42 items that are rated on a 6-point scale ranging from 1 = *strongly disagree* to 6 = *strongly agree*. A sample item is "I don't like to be with people who are capable of unexpected actions." Appropriate items were reverse scored and item ratings were averaged such that higher scores indicate greater need for cognitive closure. In terms of reliability, Cronbach's alpha was .84 in a sample of undergraduate students

(Webster & Kruglanski, 1994). Regarding validity, NFCS scores were correlated positively with such constructs as authoritarianism, intolerance for ambiguity, dogmatism, cognitive complexity and impulsivity in samples of undergraduate students and adult library patrons (Webster & Kruglanski, 1994). In the present study, Cronbach's alpha for responses to items on the NFCS was .83.

Social Dominance Orientation

The Social Dominance Orientation scale (SDO; Pratto et al., 1994) is a commonly used measure of an individual's desire to maintain hierarchical social systems where one's in-group is perceived to be superior to out-groups. The SDO is comprised of 16 items that are rated on a 7-point scale ranging from 1 = *very negative* to 7 = *very positive*. A sample item is "Some groups of people are inferior to other groups." Appropriate items were reverse scored and item responses were averaged with higher scores reflecting greater social dominance orientation. In terms of reliability, Cronbach's alpha for responses to SDO items was .80 in a sample of undergraduate students (Pratto et al., 1994). Validity evidence includes negative correlations of SDO scores with empathy, altruism, and communality in undergraduate samples (Pratto et al., 1994). Cronbach's alpha for response to SDO items in this present sample was .94.

Aggression

The Aggression Questionnaire (AQ; Buss & Perry, 1992) is a measure of a person's tendency to aggress along four subtraits of aggression. Accordingly, the 29 AQ items are scored along four subscales: Physical Aggression, Verbal Aggression, Anger, and Hostility. Items are rated on a 5-point scale ranging from 1 = *extremely uncharacteristic of me* to 5 = *extremely characteristic of me*. A sample item is "If somebody hits me, I hit back." Appropriate items were reverse scored and item ratings were averaged, with higher scores indicating a greater tendency to aggress. In terms of reliability, Cronbach's alphas were .85 for responses to Physical

Aggression items, .72 for responses to Verbal Aggression items, .83 for responses to Anger items, and .77 for responses to Hostility items in an undergraduate student sample (Buss & Perry, 1992). Validity of AQ scores has been demonstrated through their positive correlations with other personality traits such as assertiveness, competitiveness, and emotionality, and their independence from sociability (Buss & Perry, 1992). In this study, Cronbach's alphas were .87 for responses to Physical Aggression items, .74 for Verbal Aggression items, .85 for Anger items, and .75 for Hostility items.

Social Desirability

The Marlowe-Crowne Social Desirability scale (MCSD; Crowne & Marlowe, 1960) is a widely-used measure of a person's desire to provide socially desirable responses. The MCSD has 33 items to which participants mark either True or False. A sample item is "Before voting, I thoroughly investigate the qualifications of all the candidates." In prior literature, overall scores have been obtained both by either summing or averaging item responses. For this study, appropriate items were reverse scored and item responses were averaged. Higher scores indicate more socially desirable responding. In terms of reliability, Cronbach's alphas for responses to items on the MCSD have ranged from .64 to .78 in samples of undergraduate students (Loo & Thorpe, 2000). In terms of validity, MCSD scores have been shown to correlate with MMPI Lie scores in a sample of undergraduate psychology students (Crowne & Marlowe, 1960). In this present study, KR-20 (equivalent to Cronbach's alpha for dichotomous items) for responses to MCSD items was .70.

Procedure

A total of 251 participants were recruited from an introductory psychology course at a large Midwestern university and received extra credit in exchange for their participation. Participants logged into the institution's secure online data collection program (Sona Systems),

to choose studies in which to participate. This study was described as a study of participants' feelings about a variety of topics and their attitudes toward different groups of people. After selecting to participate in this study, participants read a consent form and marked their consent if they chose to participate. Participants completed the survey instruments (presented in randomized order) and upon completing the survey were provided a debriefing statement. As this study focused on non-transgender persons' attitudes toward transgender individuals, participants' data were excluded from analyses if they self-identified as transgender ($n = 1$), resulting in a final data set of 250 participants.

CHAPTER 3 RESULTS

Structure of Anti-transgender Prejudice Operationalized with the Transphobia Scale

Before proceeding to the tests of the hypotheses, we examined the replicability of the posited unidimensional structure of the Transphobia Scale (TS) items using confirmatory factor analysis (CFA). The distribution of TS items met guidelines for univariate normality (i.e., skewness indices ≤ 3 , kurtosis indices ≤ 10 ; Chou & Bentler, 1995; Kline, 2005). Regarding multivariate normality, mardia's coefficient was 11.57, and two participants emerged as multivariate outliers with Mahalanobis distances significant at $p < .001$. But none of these participants exhibited patterns of random or consistent extreme responding (e.g., series of "1" or "7" responses on a 1 to 7 rating scale) and iteratively removing their data from the dataset did not change fit indices or parameter estimates. Thus, we included their data in tests of model fit. This seemed reasonable given that ML estimation is robust to moderate multivariate nonnormality (McDonald & Ho, 2002; Muthén & Kaplan, 1985; Weston & Gore, 2006) particularly when univariate normality is achieved (Muthén & Kaplan, 1985). Based on prior evidence and recommendations that a sample size of 200 is adequate for CFA (Quintana & Maxwell, 1999; Weston & Gore, 2006; Kline, 2005), we deemed our sample size of 250 to be sufficient for these analyses.

Confirmatory Factor Analysis of the Transphobia Scale

We conducted a CFA using maximum likelihood estimation with AMOS 18.0 (Arbuckle, 2006) to test the unidimensional factor structure of the Transphobia Scale as originally proposed by Nagoshi et al. (2008). Criteria for acceptable absolute fit indices, such as the Root Mean Square Error of Approximation (RMSEA) and the Standardized Root Mean Residual (SRMR) have ranged from less conservative, RMSEA, SRMR $\leq .10$, to more conservative, RMSEA $\leq .08$,

SRMR \leq .06 (Hu & Bentler, 1999; Quintana & Maxwell, 1999; Weston & Gore, 2006). Criteria for incremental fit indices such as the Comparative Fit Index (CFI) have ranged from less conservative, CFI \geq .90, to more conservative, CFI \geq .95 (Weston & Gore, 2006). Researchers, however, have cautioned against applying strict cut-offs to these fit indices at the expense of other theoretical considerations, such as model complexity and sample size (Hu & Bentler, 1999; Quintana & Maxwell, 1999; Weston & Gore, 2006).

The unidimensional model yielded acceptable fit to the TS data, $\chi^2 (27, N = 250) = 68.07$, $p < .001$, RMSEA = .08, 90% CI: .06, .10, SRMR = .05, CFI = .94. We are unable to compare the factor loadings from the present analysis to the exploratory factor analysis (EFA) factor loadings in the study conducted by Nagoshi et al. because the specific factor loadings were not described in that study. However, Nagoshi et al. stated that one item (Item 6: “I believe that the male/female dichotomy is natural”) had a low factor loading of .18 in their sample. This finding was replicated in the present study, with item 6 loading significantly at .19; all other items had significant factor loadings ranging from .39 to .82 (Table 3-1). Thus, the posited unidimensional structure of TS items was generally supported in the present data.

Structural Equation Model of Hypothesized Relations

Bivariate correlations and descriptive statistics for the samples’ scores on the measures of interest are presented in Table 3-2. To model the latent variables, we constructed three or more indicators per latent construct (e.g., Weston & Gore, 2006). For latent constructs assessed by three or more scales or subscales, we used those scale and subscale scores as indicators; for constructs assessed with one or two measures, we created three to four item parcels (depending on the number of items) from those measures. To create these item parcels, we conducted exploratory factor analyses of data from each measure, rank ordered the items according to their factor loadings, and assigned items to parcels in countervailing order to maximize the equality of

average factor loadings between parcels. Using this procedure, we created three parcels each for anti-transgender prejudice, need for closure, and social desirability; four parcels for social dominance orientation; and four parcels for traditional gender role attitudes: two parcels of Gender Role Belief Scale (GRBS) items and two parcels of Attitudes toward Women Scale (AWS) items. Importantly, three items on the GRBS are also on the AWS; to reduce item redundancy and multicollinearity between indicators, we removed the three overlapping items from the AWS prior to exploratory factor analysis and item parcel creation. For aggression, we used the four Aggression Questionnaire (AQ) subscale scores as indicators. For anti-lesbian, gay, and bisexual (LGB) prejudice we used the Attitudes toward Lesbians (ATL), Attitudes toward Gay men (ATG), Attitudes regarding Bisexuality (ARBS) -Stability and ARBS-Tolerance subscale scores as indicators. Therefore, the final measurement model was comprised of 25 indicators and seven latent variables (anti-transgender prejudice, anti-LGB prejudice, traditional gender role attitudes, need for closure, social dominance orientation, aggression, and social desirability). To test the hypotheses, we conducted latent variable structural equation modeling (SEM), using Amos 18.0 (Arbuckle, 2006) with maximum likelihood estimation. Following recommendations to use a two-step procedure for SEM (Kline, 2005; Muthén & Muthén, 2010; Weston & Gore, 2006), we evaluated the adequacy of our observed indicators in measuring their latent constructs by first testing the fit of the measurement model. Next, we tested the structural model in order to evaluate the hypothesized relations. Finally, we conducted multiple group analysis using a nested model comparison to explore potential model differences across data from women and men.

Measurement Model

In the measurement model, data for all indicators met assumptions of univariate normality (i.e., skewness indices ≤ 3 , kurtosis indices ≤ 10 ; Chou & Bentler, 1995; Kline, 2005).

Regarding multivariate normality, mardia's coefficient was 49.92, and three participants emerged as multivariate outliers with Mahalanobis distances significant at $p < .001$. But none of these participants exhibited patterns of random responding and iteratively removing their data from the dataset did not change fit indices or parameter estimates. Thus, we included their data in tests of model fit. This seemed reasonable given that ML estimation is robust to moderate multivariate nonnormality (McDonald & Ho, 2002; Muthén & Kaplan, 1985; Weston & Gore, 2006) particularly when univariate normality is achieved (Muthén & Kaplan, 1985), Fit index values for the measurement model were $\chi^2(254, N = 250) = 548.03, p < .001$, CFI = .93, RMSEA = .07 (90% CI: .06, .07), and SRMR = .06. As discussed previously, these fit indices fell within the range of criteria for adequate model fit, particularly considering that CFIs can be depressed in models with smaller sample sizes ($n \leq 500$), or models that are more complex (Hu & Bentler, 1999; Quintana & Maxwell, 1999; Weston & Gore, 2006). Additionally, all indicators loaded positively and significantly on their corresponding latent constructs (Table 3-3). Therefore, the constructs represented in this model seemed to be adequately measured by the observed variables.

Structural Model

Next we tested the hypothesized structural model to evaluate the unique relationships of anti-LGB prejudice, traditional gender role attitudes, need for closure, social dominance orientation, and aggression with anti-transgender prejudice, controlling for social desirability (Figure 3-1). Fit index values for the structural model were $\chi^2(254, N = 250) = 548.03, p < .001$, CFI = .93, RMSEA = .07 (90% CI: .06, .07), and SRMR = .06. These values fell within the range of criteria for adequate model fit (Quintana & Maxwell, 1999; Weston & Gore, 2006). This model accounted for 74% of the variance in anti-transgender prejudice. As shown in Figure 1, with social desirability controlled, anti-LGB prejudice and traditional gender role attitudes were

positively and uniquely related to anti-transgender prejudice. Aggression was negatively related to anti-transgender prejudice. Neither need for closure nor social dominance orientation were related uniquely to anti-transgender prejudice.

Exploring Suppressor Effect on Aggression

The aggression scales had demonstrated nonsignificant or small positive zero-order correlations with anti-transgender prejudice, but aggression yielded significant positive unique relation with anti-transgender prejudice in the structural equation model. This pattern suggests the presence of a suppression effect (Horst, 1941; Paulhus, Robins, Trzensniewski & Tracy, 2004). To identify the suppressor variable, we conducted a series of structural equation model analyses, including only aggression and one other variable until we replicated the suppression effect (i.e., a small positive path “flipping” its sign to demonstrate a small negative relation between aggression and anti-transgender prejudice). This iterative testing of the variables in the model revealed social desirability to be the suppression variable, having a classical suppressor effect on aggression. That is, when social desirability was controlled, the unique positive relation between aggression and anti-transgender prejudice became small and negative.

Comparisons of Models for Women and Men

Consistent with prior literature (e.g., Hill & Willoughby, 2005; Nagoshi et al., 2008), data from the present study yielded a significant difference in mean scores on the Transphobia Scale in an independent samples T-test between women and men, $M_{diff} = .77$, $t(248) = 5.87$, $p < .001$. To explore whether the pattern of hypothesized relations between the predictor variables and anti-transgender prejudice differed significantly between women and men in the hypothesized model, we conducted a multiple group comparison analysis using a nested model comparison. We first ran a baseline model without cross-group equality constraints on the paths between the predictor variables (anti-LGB prejudice, traditional gender role attitudes, need for closure, social

dominance orientation, aggression, and social desirability) and anti-transgender prejudice. We compared this to a model where the predictor-criterion paths were constrained to be equal between women and men. To evaluate whether there was a significant difference between women and men in the pattern of predictor-criterion relations, we examined the difference in chi-square values between the baseline model and the model with cross-group equality constraints. We found a nonsignificant chi-square difference, $\Delta\chi^2 (23 N = 250) = 32.64, p = .09$. Therefore, constraining the paths to be equal across groups did not result in a significantly worse fit of the data to the model, indicating that the pattern of relations between predictor variables and anti-transgender prejudice was similar for women and men.

Table 3-1. Confirmatory factor analysis loadings for the transphobia scale

Variable	Factor Loading	Uniqueness
1. I don't like it when someone is flirting with me, and I can't tell if they are a man or a woman	.51**	.74
2. I think there is something wrong with a person who says that they are neither a man nor a woman	.82**	.33
3. I would be upset, if someone I'd known a long time revealed to me that they used to be another gender	.74**	.45
4. I avoid people on the street whose gender is unclear to me	.68**	.54
5. When I meet someone, it is important for me to be able to identify them as a man or woman	.66**	.56
6. I believe that the male/female dichotomy is natural	.19*	.96
7. I am uncomfortable around people who don't conform to traditional gender roles, e.g., aggressive women or emotional men	.39**	.85
8. I believe that a person can never change their gender	.71**	.50
9. A person's genitalia define what gender they are, e.g., a penis defines a person as being a man, a vagina defines a person as being a woman.	.69**	.52

** $p < .01$, * $p < .05$

Table 3-2. Descriptive statistics and zero-order correlations among variables of interest

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. TS	--													
2. ATL	.58**	--												
3. ATG	.68**	.88**	--											
4. ARBS-S	.50**	.55**	.55**	--										
5. ARBS-T	.68**	.84**	.89**	.67**	--									
6. AWS	.50**	.62**	.65**	.34**	.60**	--								
7. GRBS	.62**	.68**	.71**	.41**	.67**	.78**	--							
8. NFC	.30**	.22**	.22**	.20**	.24**	.16*	.22**	--						
9. SDO	.44**	.57**	.60**	.39**	.59**	.57*	.52**	.20**	--					
10. AQ-P	.13*	.21**	.24**	.14*	.15*	.41**	.30**	.29**	.14*	--				
11. AQ-V	.11	.07	.10	.10	.06	.11	.14*	.10	.03	.46**	--			
12. AQ-A	.03	.17**	.12	.18*	.07	.24**	.16*	.19**	-.01	.68**	.55**	--		
13. AQ-H	-.03	.03	.01	.06	-.02	.11	.12	.13*	.19**	.39**	.33**	.52**	--	
14. MCSD	-.23**	-.12	-.12	-.16*	-.11	-.10	-.16*	-.15*	-.08	-.27**	-.23**	-.34**	-.26**	--
<i>M</i>	4.24	3.17	3.58	2.80	2.40	1.80	3.41	3.57	2.65	2.25	2.85	2.26	2.70	1.40
<i>SD</i>	1.10	1.68	2.13	.70	.96	.48	.89	.40	1.09	.83	.80	.80	.70	.20
Possible Range	1-7	1-9	1-9	1-5	1-5	0-3	1-7	1-6	1-7	1-5	1-5	1-5	1-5	1-2
α	.84	.94	.96	.88	.91	.86	.87	.83	.94	.87	.74	.85	.75	.70

Note: Higher scores indicate higher levels of the construct assessed. TS = Transphobia Scale, ATL = Attitudes Toward Lesbians scale, ATG = Attitudes Toward Gay Men scale, ARBS-Stability = Attitudes Regarding Bisexuality Scale-Stability subscale, ARBS-T = Attitudes Regarding Bisexuality Scale-Tolerance subscale, AWS = Attitudes Toward Women Scale, GRBS = Gender Role Beliefs Scale, NFC = Need For Closure Scale, SDO = Social Dominance Orientation Scale, AQ-P = Aggression Questionnaire-Physical Aggression scale, AQ-V = Aggression Questionnaire-Verbal Aggression scale, AQ-H = Aggression Questionnaire-Hostility scale, AQ-A = Aggression Questionnaire-Anger scale, MCSD = Marlowe-Crowne Social Desirability Scale.

* $p < .05$, ** $p < .01$.

Table 3-3. Factor loadings for the anti-transgender prejudice measurement model

Latent variable and indicator	Unstandardized Loading	SE	Z	Standardized Loading
Anti-transgender attitudes				
TS Parcel 1	.92	.07	13.20**	.74
TS Parcel 2	1.05	.08	13.13**	.78
TS Parcel 3	.97	.07	13.86**	.75
Anti-LGB attitudes				
ATG	2.04	.10	20.40**	.96
ATL	1.52	.08	19.00**	.91
ARBS-T	.90	.05	18.00**	.93
ARBS-S	.44	.04	11.00**	.62
Traditional gender role attitudes				
AWS Parcel 1	.39	.03	13.00**	.73
AWS Parcel 2	.23	.02	11.50**	.62
GRBS Parcel 1	.83	.05	16.60**	.87
GRBS Parcel 2	.83	.05	16.60**	.91
Need for closure				
NFC Parcel 1	.33	.03	11.00**	.77
NFC Parcel 2	.38	.03	12.67**	.81
NFC Parcel 3	.41	.03	13.67**	.85
Social dominance orientation				
SDO Parcel 1	1.08	.06	18.00**	.89
SDO Parcel 2	1.05	.06	17.50**	.91
SDO Parcel 3	1.03	.06	17.17**	.90
SDO Parcel 4	1.07	.06	17.83**	.91
Aggression				
AQ-P	.63	.05	12.60**	.76
AQ-V	.48	.05	9.60**	.60
AQ-H	.39	.04	9.75**	.90
AQ-A	.72	.04	18.00**	.56
Social desirability				
MCSD Parcel 1	.16	.02	8.00**	.58
MCSD Parcel 2	.16	.02	8.00**	.59
MCSD Parcel 3	.14	.02	7.00**	.54

Note: TS = Transphobia Scale, ATL = Attitudes Toward Lesbians subscale, ATG = Attitudes Toward Gay Men subscale, ARBS-S = Attitudes Regarding Bisexuality Scale-Stability subscale, ARBS-T = Attitudes Regarding Bisexuality Scale-Tolerance subscale, AWS = Attitudes Toward Women scale, GRBS = Gender Role Beliefs Scale, NFC = Need for Closure, SDO = Social Dominance Orientation, AQ-P = Aggression Questionnaire-Physical Aggression Scale, AQ-V = Aggression Questionnaire-Verbal Aggression scale, AQ-H = Aggression Questionnaire-Hostility scale, AQ-A = Aggression Questionnaire-Anger scale, MCSD = Marlowe-Crowne Social Desirability scale

** $p < .01$

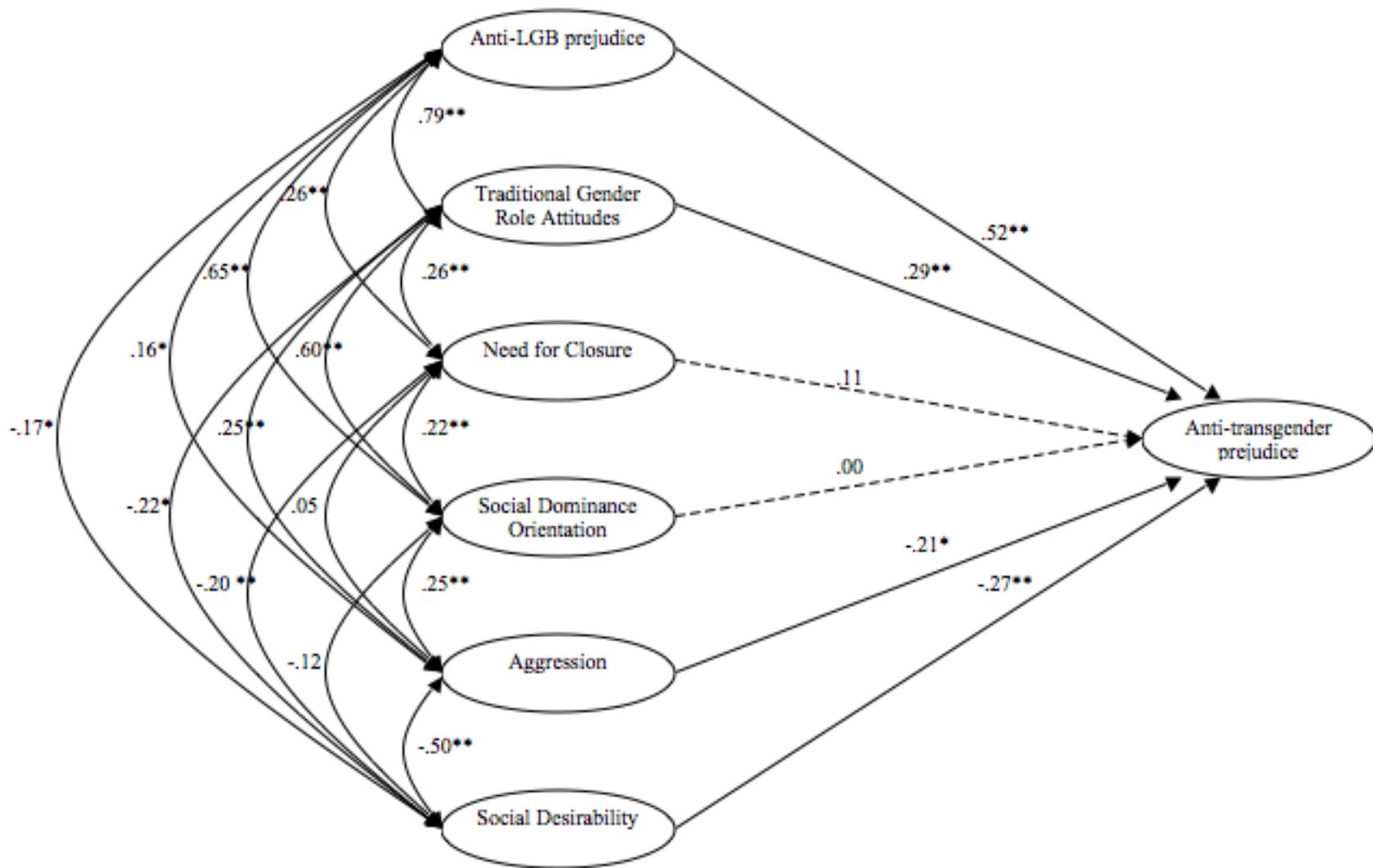


Figure 3-1. Structural model of relations among variables of interest for anti-transgender prejudice. Dashed lines indicate nonsignificant paths. * $p < .05$, ** $p < .0$

CHAPTER 4 DISCUSSION

This study contributes to research on anti-transgender prejudice by examining the relations of such prejudice with a number of theoretically relevant constructs. Results from this study suggest that anti-transgender prejudice is more closely related to sexual orientation and gender role-specific attitudes (i.e., anti-lesbian, gay, and bisexual prejudice and traditional gender role attitudes) than to broader individual difference correlates of prejudicial attitudes (i.e., need for closure, social dominance orientation). By identifying key correlates of anti-transgender prejudice, these findings can advance theoretical and empirical understanding of anti-transgender prejudice and also inform psychoeducational and social justice intervention programs aimed at reducing anti-transgender prejudice and its negative impact on transgender individuals and communities.

Consistent with our hypotheses and with prior literature (Hill & Willoughby, 2005; Nagoshi et al., 2008), after controlling for social desirability, anti-lesbian, gay, and bisexual (LGB) prejudice was positively and significantly linked to anti-transgender prejudice. Furthermore, among the set of variables in the model, anti-LGB prejudice emerged as the construct with the largest unique relation with anti-transgender prejudice. This strong association may reflect the perception that sexual orientation and gender identity and presentation minority persons as contradicting sex-typed gender role prescriptions (Fassinger & Arseneau, 2007). Therefore, based on the present results, anti-LGB prejudice may be of particular interest in the understanding of anti-transgender prejudice. In designing and implementing intervention programs to reduce individuals' negative attitudes toward transgender individuals, counselors could work with their clients to explore more fully their feelings not only toward transgender individuals, but also toward gay men, lesbian women, and bisexual persons, as these attitudes are

so strongly tied together. Moreover, counselors could work with clients to understand the common thread (i.e., traditional gender role attitudes) potentially underlying prejudice towards both LGB and transgender populations. Such exploration may also be helpful for counselors-in-training who are seeking to increase competency in working with transgender clients.

It is unsurprising, therefore, that adherence to traditional gender role attitudes was found to relate positively and significantly to anti-transgender prejudice. While the unique relation of adherence to traditional gender role beliefs with anti-transgender prejudice was less than that of anti-LGB attitudes, it was nonetheless one of the stronger correlates of anti-transgender prejudice in this model, replicating results from prior literature (e.g., Hill & Willoughby, 2005). As a result, in addition to anti-LGB prejudice, counselors engaging in prejudice-reduction interventions might aim to assist clients in further understanding their gender role ideology and how this might impact their views of transgender individuals. Relatedly, counselors-in-training could be encouraged to explore their beliefs and attitudes regarding gender roles when working with a transgender client. Taken together, the results of this study suggest that addressing anti-LGB prejudice and traditional gender roles may be helpful in intervention programs aimed at reducing anti-transgender prejudice.

Among the broad individual difference variables included in the model, only aggression proneness yielded a significant unique link with anti-transgender prejudice; and, with social desirability controlled in the model, aggression's correlation with anti-transgender prejudice was opposite to the direction hypothesized. Specifically, in the present study, the zero-order correlations of the aggression subscales with anti-transgender prejudice revealed that only physical aggression had a significant small positive correlation with anti-transgender prejudice, and the other aggression subscale scores were not correlated significantly with anti-transgender

prejudice. But, in the structural model: a significant small negative relation emerged between aggression and anti-transgender prejudice, after controlling for social desirability. The zero-order correlations involving aggression in the present study were consistent with a pattern of small positive zero-order correlations observed in prior research (Nagoshi et al., 2008). But the present results revealed that social desirability acted as a suppressor on aggression in this study, such that before social desirability was entered into the structural equation model, it suppressed criterion-irrelevant variance in aggression. With social desirability controlled for, aggression was able to more efficiently predict variance in anti-transgender prejudice (Paulhus, Robins, Trzesniewski & Tracy, 2004). These findings underscore the importance of controlling for social desirability in future studies of the association between self-reported aggression proneness and anti-transgender prejudice. Furthermore, researchers could employ experimental study designs to measure behavioral manifestations of aggression and its relation to anti-transgender prejudice.

Finally, contrary to hypotheses, neither need for closure nor social dominance orientation was related uniquely to anti-transgender prejudice. While Mohr and Rochlen (1999) demonstrated a positive zero-order correlation between need for closure and anti-bisexual prejudice, the relation of need for closure with anti-transgender prejudice has, until now, been unexplored in the research literature. This study's findings suggest that need for closure does not account for unique variance in anti-transgender prejudice beyond the other variables included in the model. Additionally, though social dominance orientation has been linked to various forms of prejudice in past research (Pratto et al., 1994), it also did not correlate uniquely to anti-transgender prejudice in this study. A similar finding was discovered in a study of the key correlates of anti-LGB prejudice (Goodman & Moradi, 2008); after controlling for other variables, social dominance orientation did not relate uniquely to anti-LGB prejudice. Taken

together, the results of this study point to anti-LGB prejudice and adherence to traditional gender role attitudes as key correlates of anti-transgender prejudice.

Consistent with prior literature (e.g., Hill & Willoughby, 2005; Nagoshi et al., 2008), results of this study demonstrate differences between women and men in level of anti-transgender prejudice, with men reporting more negative attitudes toward transgender persons than women. However, results of this study also suggest that the pattern of relationships between anti-transgender prejudice and other constructs does not differ between women and men. These findings are similar findings from other studies that have found no differences between women and men in the relationships of anti-LGB prejudice with other constructs (e.g., Goodman & Moradi, 2008). Thus, findings from this study suggest that psychoeducational and social justice programs aimed to reduce anti-transgender prejudice can be designed for working with women and men together.

Results of this study also provide additional psychometric support for the Transphobia Scale (Nagoshi et al., 2008), by replicating the TS's unidimensional structure in a sample independent of the instrument development study. Thus, researchers and practitioners may have greater confidence in using the TS as a unidimensional measure of anti-transgender prejudice. However, findings from the present confirmatory factor analysis (CFA) and from the exploratory factor analysis (EFA) conducted by Nagoshi et al. suggest revisiting the wording or use of item 6 ("I believe that the male/female dichotomy is natural") in the measure.

Despite the contributions of this study to the literature on anti-transgender prejudice, its findings should be interpreted in light of a number of limitations. The demographic composition of the present sample forms the boundaries for interpretation of the results. All participants in this study were undergraduate students, the vast majority of whom identified as White. This

limits the generalizeability of the findings to the broader population. Thus, future research should examine the correlates of anti-transgender prejudice with samples that represent greater diversity in terms of age, race/ethnicity, sexual orientation, level of educational, socioeconomic status, and other backgrounds.

Future research should also examine the effect of contextual variables on anti-transgender prejudice. The present study focused on individual differences in attitudes and cognitive style. Previous research suggests that contextual and interpersonal factors, such as personally knowing a transgender individual (Hill & Willoughby, 2005; Hill, Menvielle, Sica, & Johnson, 2010), may also be important additional factors to consider in relation to anti-transgender prejudice. Future research, therefore, could explore the concomitant roles of individual differences along with intrapersonal and contextual factors in relation to anti-transgender prejudice. The present findings suggest that anti-LGB prejudice and traditional gender role attitudes would be key individual difference factors to include in such research. Furthermore, contextual factors related to these individual difference variables might be useful places to start the exploration of contextual correlates of anti-transgender prejudice. For example, exposure to gender non-traditional role models or gender, sexuality, and women's studies classes may be relevant experiential correlates to explore.

Though this study focused on anti-transgender prejudice, future research could also examine the relations of key variables to transgender-affirming attitudes as well as to transgender-affirming and rejecting behaviors. There is a substantial body of research that has documented transgender individuals' experiences of prejudice and discrimination as a result of their gender identity or presentation (e.g., Clements-Nolle et al., 2006; Grant et al., 2011; Lombardi et al., 2001), and research that seeks to understand the basis of these acts is sorely

needed. To our knowledge, only one study to date has sought to explore the relation between anti-transgender attitudes and behaviors. In an experimental study of anti-transgender prejudice and participants' ratings of simulated transsexual characters, participants' anti-transgender attitudes were correlated negatively with their judgments of transsexual characters. Specifically, participants rated transsexual characters as less attractive, in greater need of mental health services, and more negatively in general than they did non-transsexual characters (Gerhardstein & Anderson, 2010). Future research could examine factors that facilitate or interrupt the translation of anti-transgender prejudice into anti-transgender behaviors, such as hate crimes and school bullying. Similarly, research could explore factors that promote transgender-affirming behaviors.

Finally, though we controlled for socially desirable responding in our model, it is important to note that there was a negative correlation between social desirability and anti-transgender prejudice. That is, more social desirability was associated with lower anti-transgender prejudice. Future research could continue to focus on ways to minimize the potential for social desirability, such as conducting Internet-based self-report studies where anonymity is greater. Additionally, researchers could measure anti-transgender prejudice in other ways that do not rely upon self-reported data (i.e., physiological measures, implicit bias measures, etc) in order to reduce the potential for socially desirable responding.

Despite the limitations outlined above, the findings from this study can further our understanding of anti-transgender prejudice by locating such prejudice within a broader framework of prejudicial attitudes. By highlighting those constructs most closely associated with anti-transgender prejudice, then findings can also inform intervention efforts aiming to reduce anti-transgender prejudice.

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Esther Tebbe was born in Nicosia, Cyprus, and moved to Madison, Wisconsin in 2001. She graduated from James Madison Memorial High School in 2005, and completed her undergraduate work at the University of Wisconsin – Madison, where she studied psychology and social welfare. After graduating with her Bachelor of Arts in 2009, she moved to Gainesville, Florida to begin graduate studies in counseling psychology at the University of Florida.