# The Impact of a Brief Humanizing Intervention on Prejudice Towards Transgender Individuals

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Transgender individuals face an abundance of stigma and prejudice from society, making them vulnerable to discrimination, violence, increased stress, and mental health deterioration (Hughto et al., 2015). This study looked at the extent to which a brief humanizing intervention can decrease prejudice against transgender individuals using methods designed to reduce social desirability bias. Unlike past work, the current study implemented a control group that was not subjected to any intervention. Participants (*N*=302) were randomly assigned to one of three conditions: the control condition, the transman letter condition, and the musician letter condition. Only cisgender participants within the gender binary were used in the analysis (*N*=293). The humanizing intervention involved having participants read a letter written by a transgender man in which he comes out to his parents. The musician letter condition involved having participants read a letter written by a young man telling his parents that he is quitting college to pursue a career in music. The control condition did not include any letter. Participants then responded to various dependent measures such as attitudes towards transgender individuals and empathy. Few effects of the intervention were observed, which were inconsistent with past research. However, the results of this study showed an impact on participants' perception of how parents should react to their children coming out and a decrease in the standard gender differences in empathy. Thus, the results offer a nuanced understanding of the extent to which humanizing interventions can reduce prejudice towards transgender individuals.

*Keywords:* Social Psychology, Prejudice Reduction, Humanizing Intervention, Transgender

Transgender is an umbrella term used to describe people's experiences with gender identity. Transgender individuals are people whose sex assigned at birth does not align with their true gender identity. Transgender men are men who were assigned female at birth and transgender women are women who were assigned male at birth (National Center for Transgender Equality, 2016).

The limited body of literature surrounding people in this community and their experiences has been growing over recent years. This literature consistently demonstrates that transgender individuals face an abundance of stigma and prejudice from society, making them vulnerable to discrimination and violence (Pellicane & Ciesla, 2022). Prejudice is defined as a negative attitude or negative behavior towards a person or a group of people based on their belonging to a certain social group (Allport & Lindzey, 1954). Transgender people are twice as likely to be unemployed compared to the larger population because of laws and policies that allow employment discrimination (National LGBTQ Task Force, 2022). The 2022 National Survey by The Trevor Project showed that 71% of transgender and non-binary youth reported having been discriminated against based on their gender identity. In addition, transgender folk are four times more likely to be sexually assaulted, raped, or assaulted in comparison to their cisgender counterparts (Williams Institute, 2021). Thirty-seven percent of transgender and non-binary youth have reported being physically threatened or harmed because of their gender identity (The Trevor Project, 2022). Seventy-three percent of these youth experience symptoms of anxiety and 58% experience symptoms of depression and 1 in 5 transgender or non-binary youth have attempted suicide in the past year (The Trevor Project, 2022). Moreover, discrimination restricts transgender individuals from receiving healthcare (Hughto et al., 2015). For example, in Minnesota, around 20% of transgender folk reported that they had been denied healthcare completely and many others said that they have had poor healthcare experiences (Health Partners, 2017).

This discrimination affects the quality of life that transgender individuals have, especially affecting the mental health of transgender folk. Minority stress theory can be used to better understand the rates of mental health hardships that transgender individuals face. Minority stress theory states that marginalized communities experience unique and constant exposure to harsh stressors because of their identity. Due to the presence of such chronic stress and continuous discrimination which stigmatizes these individuals, they are at a higher risk of developing mental health issues (Meyer, 2003). The hardships that transgender folk experience have caused high rates of suicide ideation and attempts among transgender youth (Grossman & D'Augelli, 2010). For example, being misgendered and discriminated against by society can cause transgender individuals to experience significant psychological distress. Additionally, due to high levels of

discrimination, transgender individuals are more likely to experience loneliness and a lack of belongingness to a community. This triggers transgender folk to engage in negative self-appraisal and have low self-esteem and low self-worth. In turn, this leads to higher levels of suicidal ideation and attempts within the transgender community (Hendricks & Testa, 2012). Although society can negatively affect transgender individuals' health, social support, in comparison, can mitigate the presence of psychological distress (McLemore, 2018).

**Reducing Transphobia**

Although it can be helpful to provide transgender individuals with support and resources to cope with societal discrimination, this support does not directly address nor decrease discrimination. Because the transgender community is subject to higher rates of discrimination and violence, it is imperative to study prejudice reduction methods that can ameliorate the quality of life of trans folk (Tompkins et al., 2015). Although the body of literature in this field has been growing recently, there is still relatively little research looking at the efficacy of interventions that reduce transphobia, or prejudice towards transgender folk.

The existing body of research surrounding this topic investigates a number of different types of interventions that reduce prejudice. Educational interventions involve giving participants scientific information about the lives of transgender individuals to increase the former's awareness of transgender lives and decrease transphobia (Chan et al., 2009). One study aimed to measure the efficacy of an educational webinar training by subjecting participants to three awareness trainings: an anti-stigma training, a panel training, and a webinar, each of which provided educational information about transgender lives such as the effect of transphobia on transgender lives and the different forms of gender affirmation (Mizock et al., 2017). Participants' transphobic attitudes were tested before and after the training. Although all the training showed a reduction in transphobia, the webinar proved to be an especially valuable tool for spreading awareness because of the flexibility it offered being internet-based. This finding is consistent with previous literature which suggested webinar training, in general, was more effective in disseminating information than other forms of educational training (Mizock et al., 2017). Furthermore, another study focusing on healthcare workers also suggested that educational training increased awareness about the needs of transgender individuals and led to better healthcare for the transgender community (McDowell et al., 2020).

Although educational training is effective at reducing transphobia, they tend to focus mainly on the scientific explanation of transgender lives, highlighting the biological and definitional framework of being transgender. These trainings fail to include the valuable layer of humanizing transgender individuals by showing the lived experiences of transgender folk and inciting empathy. In order to humanize transgender individuals, researchers thought to broaden transgender awareness beyond just the biological explanation by sharing information about personal transgender experiences. Sharing these experiences is meant to not only educate people about transgender lives but to also incite empathy, which can reduce bias (Whitford & Emerson, 2019). Empathy is the act of understanding another person's thoughts and feelings. Previous literature indicates that empathy has played a significant role in decreasing prejudice against the Lesbian, Gay, and Bisexual community provoking participants to imagine what other people's lives may be like (Hodson et al., 2009). Past studies looked at how prejudice reduction affected a specific marginalized community and ran studies to see if the same effect would occur in a separate minority community. Thus, researchers saw how empathy affected prejudice against the LGB community and hypothesized that it could have that desired effect on the transgender community.

Intergroup contact theory has been used to humanize transgender folk and incite empathy. Intergroup contact theory states that, under the right conditions, the interaction of one group with another can lead to more positive attitudes between the two groups (Allport, 1954). Participants in one study on intergroup contact were randomly assigned into two groups: one which received a panel presentation by a transgender person followed by a lecture presentation two days later, and another which received the same presentations but in reverse order (Walch et al., 2012). The group who received the transgender panel presentation first showed less stigma against transgender individuals compared to those who received the lecture first. Thus, it can be inferred, experiencing humanizing contact with a transgender person before learning more factual information about them primes participants to respond more positively to learning informa-

tion about transgender individuals. This study showed that although brief, meaningful contact with the transgender presenter resulted in more stigma reduction that lasted for a prolonged period in comparison to the other condition. Although contact can reduce transphobia, it puts a lot of pressure, burden, and responsibility on transgender folk, and it may not be logistically feasible. To address these concerns, a follow-up study explored whether imagined intergroup contact can have the same effect as actual intergroup contact (Moss-Racusin & Rabasco, 2017). Participants either engaged in imagined intergroup contact with a cisgender person or with a transgender person and were then asked to rate how they felt about these people and whether transgender folk were likable and hirable. Imagined intergroup contact reduced transphobia and eliminated the difference previously present around hireability and likeability between cisgender and transgender persons. In other words, imagined intergroup contact was an efficacious intervention to decrease transphobia. Inspired by this work, the effect of virtual contact with transgender individuals has also been studied (Boccanfuso et al., 2020). In this follow-up, participants were randomly assigned into two groups that had virtual contact through a text-chat program with someone who either told them that she was a cisgender woman or that she was a transgender woman. Participants were then asked to respond to a questionnaire that assessed transgender stigma. Results showed that this intervention successfully reduced transphobia in cisgender men but not in cisgender women. The reason behind this effect is the fact that cisgender men typically have more prejudice towards transgender individuals. Contact with transgender folk more heavily affects "prejudice-prone populations" and can alter their prejudice the most (Hodson, 2011).

The aforementioned literature focused on studying the efficacy of education and contact interventions alone as opposed to comparing them to one another and testing their efficacy. Case & Stewart (2013) intended to fill in some of the gaps in the literature by designing a study made of three experimental interventions and comparing their efficacy. Participants were recruited from different social science courses in a state university in Texas and assigned to one of three interventions: providing participants with a list of facts about transgenderism (educational intervention), providing participants with a letter from a transgender

adolescent to his parents (humanizing intervention), and showing participants a snippet of a documentary about transgender students in college (humanizing intervention). The documentary included the parents' reactions to the letter. The humanizing interventions were meant to incite empathy from participants toward transgender individuals. Participants were instructed to answer a questionnaire before and after the interventions that measured their attitudes toward transgender individuals. No intervention was more effective than the other. Motivated by the comparison of humanizing and educational interventions, Tompkins and colleagues (2015) also randomly assigned participants to experience either a humanizing or educational intervention. The humanizing condition showed participants that transgender folk are actual people with lives and incited empathy towards their struggles by having them watch a documentary about a transgender child who was supported by her parents in her transition. In the education condition, participants read about the diagnostic criteria for Gender Identity Disorder and then watched an interview with an expert who explained the process of transitioning and provided factual information about transgender individuals devoid of emotions. After participating in one of these two interventions, the participants completed self-report measures of feelings and attitudes towards transgender individuals. Participants in the humanizing condition endorsed less transphobic attitudes than those in the education condition. This finding suggests that humanizing interventions may be most effective at reducing transphobia among participants (Tompkins et al., 2015).

**The Present Study**

Although past research has compared the efficacy of different interventions designed to reduce transphobia, it has not employed strong control conditions. The current study focused on a humanizing intervention, as some research suggests they are more successful at reducing transphobia than education interventions (Tompkins et al., 2015). Specifically, the current study was encouraged to use one of the humanizing interventions from Case and Stewart (2013). Their letter intervention involved participants reading a letter written by an adolescent who came out to his parents as a transgender man. The letter's goal was to invoke a sense of empathy within participants when they completed a transphobia questionnaire and the

results of this group were compared to the results of other types of interventions. Both this study and others (e.g. Case & Stewart, 2013; Tompkins et al., 2015; Mizock et al.,2017) lacked independent control conditions that could have provided them with a baseline and would have strengthened their ability to assess the efficacy of the interventions. Researchers did use a pretest measure, but pretest measures can increase participants' awareness about the true purpose of the study and lead participants to artificially give less transphobic answers. While previous research was an important initial step in studying approaches to transphobia reduction, these prior studies also shared the weaknesses of having a small sample size and utilizing college student samples, who typically have a less conservative outlook on gender identity than the general population (Campbell & Horowitz, 2015). The current work seeks to extend prior research by addressing some of their potential weaknesses. Thus, this study will primarily look at the extent to which a brief empathetic intervention can decrease prejudice against transgender individuals while also reducing social desirability bias. Social desirability bias is the tendency of research participants to answer questions in a manner they assume the researchers desire (Crowne & Marlowe, 1960). This study often refers to transphobia as prejudice towards transgender individuals The current work supplements past research by using a separate control group that was not subjected to any intervention and then completed the same questionnaire as participants in the other groups. This condition provides an independent baseline to compare with the results of the interventions. Participants in the key intervention condition were instructed to read a letter written by a young man coming out to his parents as a transgender man, which was brought about by the letter presented in Case & Stewart (2013). This intervention is meant to instigate empathy towards him and reduce transphobia. The current work also extends prior research by testing another condition, a parallel version of the transman letter condition about a young adult telling his parents that he will be dropping out of college to pursue music. This intervention intends to instill empathy in participants towards the young adult to study if empathy in general affects individuals' prejudice against transgender folk. After completing one of the three conditions, participants answered self-report measures of transphobia and a number of

other dependent variables related to prejudice and intergroup attitudes.

We expected to find a significant main effect of our manipulation such that participants in the transman letter condition would have more positive reactions across all of our dependent variables, including lower levels of transphobia and prejudice, compared to participants in the control group (Hypothesis 1). This prediction is consistent with prior research which shows that implementing a humanizing intervention (transman letter condition) that incites empathy can decrease prejudice against transgender individuals (Tompkins et al., 2015). Additionally, we explored whether participants in the musician letter condition would differ from participants in the control and transman letter conditions. This letter about a young man dropping out of college to be a musician was meant to incite empathy from the participants toward his difficult situation. This condition enabled the current study to look at whether transphobia can be decreased solely by enticing empathy generally, as opposed to empathy about trans lives specifically. Previous literature shows that humanizing interventions are able to reduce prejudice towards minority groups such as people from different racial groups, people with mental illness, and people in the LGB community (Whitford & Emerson, 2019). If these effects hold true for transphobia, then participants in the musician letter condition may have less negative opinions towards transgender folk versus the control condition. However, since the empathy produced from the musician letter condition is not inspired by the vulnerability of the transgender man's experience, it was predicted to have less of an impact on transphobia compared to the transman letter condition (Hypothesis 2).

Although the current work focuses on the effect of our manipulation, this study also explored the role of participant gender. This study explored whether cisgender men would generally have more negative responses across dependent variables, including higher levels of transphobia, compared to women (Hypothesis 3). Men tend to hold more power in society compared to other gender identities, benefit from maintaining the status quo, and therefore feel more threatened by non-normative experiences (West & Borras-Guevara, 2021). Indeed, previous research has shown that men have more negative attitudes toward transgender individuals than women (Tebbe & Mora-

di, 2012; Tompkins et al., 2015). This study also explored whether our manipulation would interact with participant gender (Hypothesis 4).

## Methods

### Participants

This study was conducted through Amazon's Mechanical Turk (MTurk) which is a website used by researchers to recruit and compensate participants for a variety of kinds of tasks including psychological studies (Buhrmester, Kwang, & Gosling, 2011). Three hundred and two participants were recruited from the United States only and completed the study. They were compensated $2.50 for their participation. We ran an a priori power analysis using G*Power to determine sample size (Faul, Erdfelder, Buchner & Lang, 2009). Given our design, we set alpha to .05 and assumed a small effect size of partial eta squared .035. The analysis indicated that 270 participants would provide us with 80% power. We decided to run up to 300 participants in case we needed to exclude any participants, and due to an MTurk glitch, 302 participants responded.

195 participants indicated that they identify as female, 98 identified as male, 2 identified as transgender men, and 3 identified as non-binary individuals. The remaining 4 either chose not to respond or added a category of their own. As our analyses required roughly equal groups of participant gender, we only had the statistical power to analyze cisgender male and cisgender female participants ($N$ = 293). The participants' average age was 35.53 years old ($SD$ = 12.04). The majority (70.9%) of participants identified as White/Caucasian, 13.6% identified as African American, 7.5% identified as Asian/Pacific Islander, and 6.4% identified as Hispanic. The rest of the participants indicated they identified with another racial category or selected multiple identifications (for more information about demographics see Table 1 and Table 2).

### Design

The study used a 3-letter condition (no letter group vs. musician letter group vs. transgender letter group) x 2 participant gender (male participants vs. female participants) between-subjects design.

### Procedure and Manipulation

The study was conducted using the web survey software, Qualtrics. Participants were asked to complete a survey called "Other People's Stories." They were then randomly assigned to one of three groups:

one with no letter, one instructed to read a letter about an individual coming out to his parents as a transgender man, and one with a letter about a student who is telling his parents he wants to drop out of college to pursue music. The transgender letter was taken from Case & Stewart (2013); originally, the letter was found in "*True Selves: Understanding Transsexuality*" (Brown & Rounsley, 1996). This book includes real-life experiences of transgender people to provide insight into their families and help them better understand the hardships that transgender people go through. This is a real letter from a transgender man coming out to his parents. For this study, the letter was slightly edited: due to ethical concerns, parts that mentioned suicide/suicidal ideation were removed so as to not expose the participants to such topics. The musician's letter was based largely on the transgender letter. It was created to make sure there was a group of participants who were exposed to a letter simulation that did not involve transgender experiences. The musician and transgender letters were intended to be as parallel as possible, but with the musician's letter involving a child disclosing something difficult to their parents unrelated to gender. An example of the difference between these two letters can be seen here: in the musician's letter the following was said "*For the longest time, I had been deeply unhappy with my major- the life plan I am supposed to want,*" whereas the transgender letter said, "*For the longest time, I had been deeply unhappy with the body I am in- the body I am supposed to feel comfortable in.*" See Appendices A and B for the complete letters.

After reading the transgender letter, musician letter, or no letter, the participants were all instructed to answer the same series of questions. The questionnaire included variables detailed in the dependent measures section below, as well as filler questions such as the big five personality measure (Morizot, 2014). All scales included a prefer not to respond option. Finally, participants were debriefed regarding the true purpose of the study, which was to understand the effect of empathy on prejudice against transgender individuals. Participants were asked to re-consent given this information and offered the opportunity to have their data discarded. All participants re-consented and allowed for the use of their data.

### Dependent Measures

***Transphobia.*** Participants were asked to respond to nine questions regarding their attitudes towards gen-

der-diverse and transgender individuals on a scale from 1 (strongly disagree) to 7 (strongly agree) (Nagoshi et al., 2008). An example question is "I believe that a person can never change their gender" ($\alpha$=.93).

***Attitudes Towards Transgender Individuals.*** Participants were asked to respond to 20 questions measuring the way people feel about transgender individuals on a scale of 1 (strongly disagree) to 5 (strongly agree) (Walch et al., 2012). An example question is "I avoid transgender individuals whenever possible" ($\alpha$=.97).

***Feelings Thermometer.*** Participants completed an adapted version of the Feelings Thermometer (Murphy et al., 2011) which asked them to rate how warm they felt towards groups on a scale of 0 to 100 (0 being not warm at all and 100 being completely warm). The groups they were asked to rate their feelings towards were transgender men, transgender women, and non-binary individuals ($\alpha$=.98).

***Inclusion of Other in Self.*** Participants completed an adapted version of the Inclusion of Other in the Self Scale (Aron et al., 1992). Participants were presented with seven sets of increasingly overlapping circles, one labeled 'self' and the second labeled "other." These sets of circles began with no overlap and got progressively more overlapping. Participants were asked to choose the circle that best represents their relationship with a group, with "self" being themselves and "other" representing: transgender men, transgender women, and non-binary individuals. They were asked to do so three times for the three different groups ($\alpha$=.95).

**Exploratory Dependent Measures**

***Interpersonal Reactivity Index (IRI).*** Participants were asked to respond to 16 questions measuring levels of empathy on a scale from 1 (does not describe me well) to 5 (describes me very well) (Davis, 1980) ($\alpha$=.81). This scale is made up of four different subscales, each comprised of four items. Example questions of the four subscales perspective taking, fantasy, empathetic concern, and personal distress respectively are: "I try to look at everybody's side of a disagreement before I make a decision" ($\alpha$=.81). "I really get involved with the feelings of the characters in a novel" ($\alpha$=.84). "I often have tender, concerned feelings for people less fortunate than me" ($\alpha$=.77). "In emergency situations, I feel apprehensive and ill-at-ease" ($\alpha$=.78).

***Privilege and Oppression Inventory (POI).*** This scale was included as an exploratory measure to observe the effect that the intervention had on partici-

pants' perception of their social power and other people's marginalization within society. Participants were asked to respond to 22 questions regarding their awareness of privilege and oppression in society on a scale from 1 (strongly disagree) to 6 (strongly agree) (Hays et al., 2007). An example question is "Being White and having an advantage go hand in hand" ($\alpha$=.97).

***Ambivalent Sexism Inventory.*** This scale was included in order to observe whether the intervention could impact participants' levels of ambivalent sexism. Ambivalent sexism is made up of two sub-groups: benevolent sexism and hostile sexism. Benevolent sexism is characterized by seemingly positive comments that are actually damaging to a person. Hostile sexism is characterized by blunt and negative comments that adhere to harmful gender stereotypes. Participants were asked to respond to 22 statements concerning their views on men and women within society on a scale of 1 (disagree strongly) to 6 (agree strongly) (Glick & Fiske, 1996) ($\alpha$=.88). This scale is divided into two subscales each comprised of eleven items. An example of the first subscale, benevolent sexism, is "In a disaster, women ought not necessarily to be rescued before men" ($\alpha$=.84). An example of the second subscale, hostile sexism, is "Women are too easily offended" ($\alpha$=.83).

***System Justification.*** This scale was added to observe the effect of the intervention on how fair participants believe social systems are and whether or not they support the current social system. Participants were asked to respond to 8 items measuring how fair participants feel that social systems are on a scale of 1 (strongly disagree) to 9 (strongly agree) (Kay & Jost, 2003). An example item is "In general, you find society to be fair" ($\alpha$=.86).

***Need for Closure.*** This scale was added as an exploratory measure of how this intervention could impact participants' need for certainty and order and measure participants' ability to accept uncertainty. Participants were asked to respond to 15 questions regarding their need for certainty and how much they value order on a scale from 1 (strongly disagree) to 6 (strongly agree) (Neuberg et al., 1997). An example question is "I don't like to be with people who are capable of unexpected actions" ($\alpha$=.87).

***Reactions to Coming Out.*** Participants were asked to rate the degree to which they *should respond* with five different reactions parents could have to their son coming out to them on a scale of 1 (strongly disagree) to 7 (strongly agree). The potential reactions to coming

out were based on data from an article that reported first-person reports of parents dealing with their kids coming out as transgender (Wren, 2002). An example item is: "Take Adam to see a specialist and change his mind" ($\alpha$=.75). Using the same scale, participants were then asked to respond to the same five reactions, except this time, they were asked to imagine how they *would respond* if they were in the shoes of those parents. An example item is "Get the proper professional help to support Adam and his decisions" ($\alpha$=.76).

## Manipulation Checks and Demographics

Participants were asked four questions and all items had a "Prefer not to respond" option. The first manipulation check asked participants "Did you read a letter at the beginning of this study" with answer options: "Yes", and "No." The second manipulation check asked participants: " If yes, what was this letter about?" and had answer options: "Someone telling their parents that they are actually a man and will be going through a gender transition", "Someone telling their parents that they will be dropping out of college to pursue music", and "I did not read a letter." The third manipulation check asked participants: "Who wrote the letter that you read" with answers: "A transgender man (a man assigned female at birth)", "A transgender woman (a woman assigned male at birth)", "A cisgender man (a man assigned male at birth)", "A cisgender woman (a woman assigned female at birth)", "The gender of the letter was not specified", and "I did not read a letter." Finally, the fourth manipulation check asked: "If you read a letter, how did it end?" with answer options: "with love, Adam", "with love, Alice (soon to be known as Adam)", and "I did not read a letter."

***Demographics.*** After completing the questions, participants were asked to answer a few demographic measures such as gender, age, and race.

## Results

### Manipulation Checks

Chi-square tests of independence were performed on each manipulation check. Participants' responses to the first manipulation check regarding whether or not they read a letter were significantly associated with the actual letter condition, $\chi^2$ (2, $N$ = 292) = 211.56, $p$ < .001. All participants in both the transman letter condition and the musician letter condition reported that they read a letter at the beginning of the study. 80.00% of participants in the control condition re-

ported that they did not read a letter at the beginning of the study. This could be due to the fact that early in the study participants were told that other participants would be reading a letter. Thus, participants were instructed to answer the questionnaire knowing that other participants have read a letter.

Participants' responses to the second manipulation check that asked them what the letter was about were significantly associated with the actual letter condition, $\chi^2$ (4, $N$ = 292) = 471.76, $p$ <.001. 98.9% of participants in the transman letter condition correctly reported that they read a letter about a transman coming out to his parents. 99.01% of participants in the musician condition correctly reported that they read a letter about an aspiring musician. 81.00% of participants in the control condition correctly reported that they had not read a letter.

Participants' responses to the third manipulation check that asked them about the gender identity of the person writing the letter were significantly associated with the actual letter condition, $\chi^2$ (10, $N$ = 290) = 470.51, $p$ <.001. 87.91% of the participants in the transman letter condition reported that the person writing the letter was a transgender man. 98.02% of participants in the musician letter condition reported that the person writing the letter was either a cis-gender man or they indicated that the gender identity was not disclosed. Both of these options were considered to be correct because the letter's author used a name that is stereotypically male and did not specify their gender identity explicitly. 81.63% of the participants in the control condition indicated that they did not read a letter.

Participants' responses to the fourth manipulation check that asked them how the letter ended were significantly associated with the actual letter condition, $\chi^2$ (4, $N$ = 290) = 445.00, $p$ <.001. 91.3% of the participants in the transman letter condition reported that the letter ended with "With love, Alice (soon to be known as Adam)." 100.00% of participants in the musician letter correctly reported that their letter ended with "With love, Adam." Finally, 81.82% of the participants in the control condition correctly indicated that they did not read a letter.

### Primary Analyses

Between-subjects 3 (letter condition: no letter group vs. musician letter group vs. transgender letter group) x 2 (participant gender: male vs. female)ANOVAs were conducted on each of our dependent varia-.

bles.Follow-up Tukey tests were conducted on significant main effects of letter condition. Although our pre-registration focused primarily on the effects of letter condition only, the analysis with participant gender is reported here since consistent participant gender effects emerged, and this analysis was also outlined in the pre-registration. *Transphobia.* A significant effect of participant gender emerged such that men reported greater overall transphobia ($M = 3.51$, $SD = 1.49$) than women ($M = 3.03$, $SD = 1.54$), $F(1, 287) = 6.07$, $p = .014$, $\eta_p^2 = .02$. There was no main effect of letter condition on transphobia, $F(2, 287) = 0.60$, $p = .549$, $\eta_p^2 = .00$, nor was there a significant interaction, $F(2, 287) = 1.16$, $p = .316$, $\eta_p^2 = .01$

**Attitudes Towards Transgender Individuals.** There was no main effect of participant gender on attitudes towards transgender individuals, $F(1, 285) = 3.42$, $p = .065$, $\eta_p^2 = .01$. There was also no main effect of letter condition on attitudes towards transgender individuals, $F(2, 285) = 1.37$, $p = .256$, $\eta_p^2 = .01$, nor was there a significant interaction, $F(2, 285) = 1.89$, $p = .153$, $\eta_p^2 = .01$.

**Feelings Thermometer.** A significant effect of participant gender emerged such that women reported warmer feelings towards transgender men ($M = 70.50$, $SD = 31.19$) that did men ($M = 60.82$, $SD = 33.34$), $F(1, 287) = 5.48$, $p = .020$, $\eta_p^2 = .02$. Similarly, a significant effect of participant gender emerged such that women reported warmer feelings towards transgender women ($M = 69.49$, $SD = 32.27$) than did men ($M = 60.71$, $SD = 33.76$), $F(1, 287) = 4.38$, $p = .037$, $\eta_p^2 = .02$. There was no main effect of letter condition on feelings towards transgender men, $F(2, 287) = 0.26$, $p = .755$, $\eta_p^2 = .00$, nor towards transgender women, $F(2, 287) = 0.04$, $p = .964$, $\eta_p^2 = .00$. Additionally, nor was there a significant interaction between participant gender and letter condition when it came to transgender men, $F(2, 287) = 1.80$, $p = .168$, $\eta_p^2 = .01$ and transgender women $F(2, 287) = 1.37$, $p = .256$, $\eta_p^2 = .01$.

There was no significant effect of participant gender on feelings towards non-binary individuals, $F(1, 287) = 3.69$, $p = .056$, $\eta_p^2 = .01$. There was no main effect of letter condition on feelings towards non-binary individuals, $F(2, 287) = 0.28$, $p = .754$, $\eta_p^2 = .00$, nor was there a significant interaction, $F(2, 287) = .69$, $p = .503$, $\eta_p^2 = .01$.

**Inclusion of Other in Self.** There was no significant effect of participant gender on how close they felt

towards transgender men, $F(1, 279) = .08$, $p = .785$, $\eta_p^2 = .00$. There was no main effect of letter condition on feelings towards transgender men, $F(2, 279) = 0.71$, $p = .491$, $\eta_p^2 = .01$, nor was there a significant interaction, $F(2, 279) = .211$, $p = .810$, $\eta_p^2 = .00$.

There was no significant effect of participant gender on how close they felt towards transgender women, $F(1, 278) = .01$, $p = .925$, $\eta_p^2 = .00$. There was no main effect of letter condition on feelings towards transgender women, $F(2, 278) = 0.36$, $p = .698$, $\eta_p^2 = .00$, nor was there a significant interaction, $F(2, 278) = .28$, $p = .756$, $\eta_p^2 = .00$.

There was no significant effect of participant gender on how close they felt towards non-binary individuals, $F(1, 278) = .01$, $p = .924$, $\eta_p^2 = .00$. There was no main effect of letter condition on feelings towards non-binary individuals, $F(2, 278) = 0.46$, $p = .630$, $\eta_p^2 = .00$, nor was there a significant interaction, $F(2, 278) = .27$, $p = .767$, $\eta_p^2 = .00$.

**Interpersonal Reactivity Index (IRI).** A significant effect of participant gender emerged such that women scored higher on perspective taking ($M = 4.12$, $SD = 0.73$) than men ($M = 3.86$, $SD = 0.77$), $F(1, 286) = 7.14$, $p = .008$, $\eta_p^2 = .02$. There was no main effect of letter condition on perspective taking, $F(2, 286) = 0.52$, $p = .595$, $\eta_p^2 = .00$. However, a significant interaction between letter condition and gender emerged, $F(2, 286) = 4.35$, $p = .014$, $\eta_p^2 = .03$. Women scored higher on perspective taking ($M = 4.23$, $SD = 0.67$) than men ($M = 3.88$, $SD = 0.86$) in the control condition, $F(1, 286) = 5.04$, $p = .026$, $\eta_p^2 = .02$. Women also scored higher on perspective taking ($M = 4.22$, $SD = 0.73$) than men ($M = 3.70$, $SD = 0.70$) in the musician letter condition, $F(1, 286) = 10.90$, $p = .001$, $\eta_p^2 = .04$. However, there was no gender difference in the transman letter condition, $F(1, 286) = 0.64$, $p = .424$, $\eta_p^2 = .00$ ($M_{women} = 3.89$, $SD = .75$; $M_{men} = 4.02$, $SD = 0.73$) (See Figure 1). When broken down the other way, analyses show that there was no effect of letter condition among men, $F(2, 286) = 1.42$, $p = .244$, $\eta_p^2 = .01$, but there was an effect of letter condition among women, $F(2, 286) = 4.45$, $p = .013$, $\eta_p^2 = .03$. Follow-up Tukey tests indicate that women in the control condition and women in the musician letter condition scored higher on perspective taking than women in the transman letter condition ($p = .010$ and $p = .009$ respectively). There was no difference in perspective taking between women in the control and musician letter conditions,

$p = .980$.

A significant effect of participant gender emerged such that women scored higher on fantasy ($M = 3.86$, $SD = 0.90$) than men ($M = 3.53$, $SD = 1.04$), $F(1, 287) = 6.72$, $p = .010$, $\eta_p^2 = .02$. There was no main effect of letter condition on fantasy, $F(2, 287) = 1.08$, $p = .341$, $\eta_p^2 = .01$. However, a significant interaction between letter condition and gender emerged, $F(2, 287) = 6.45$, $p = .002$, $\eta_p^2 = .04$. Women scored higher on fantasy ($M = 3.99$, $SD = .80$) than men ($M = 3.17$, $SD = 1.18$) in the control condition, $F(1, 287) = 17.58$, $p < .001$, $\eta_p^2 = .06$. However, there was no gender difference in the musician letter condition, $F(1, 287) = 2.19$, $p = .140$, $\eta_p^2 = .01$. ($M_{women} = 3.91$, $SD = .96$; $M_{men} = 3.62$, $SD = .87$). There was also no gender difference in the transman letter condition, $F(1, 287) = .99$, $p = .319$, $\eta_p^2 = .00$ ($M_{women} = 3.65$, $SD = .91$; $M_{men} = 3.86$, $SD = 0.92$) (See Figure 2). When broken down the other way, analyses show that there was no effect of letter condition among women, $F(2, 287) = 2.30$, $p = .103$, $\eta_p^2 = .02$, but there was an effect of letter condition among men, $F(2, 287) = 4.57$, $p = .011$, $\eta_p^2 = .03$. Follow-up Tukey tests indicate that men in the transman letter condition scored higher on fantasy than men in the control condition ($p = .003$). There was no difference in fantasy between men in the control and musician letter conditions nor was there a difference between the men in the musician letter condition and the transman letter condition, ($p = .052$ and $p = .317$).

There was a significant effect of participant gender such that women scored higher on empathetic concern ($M = 4.26$, $SD = 0.70$) than men ($M = 3.91$, $SD = 0.77$), $F(1, 286) = 14.64$, $p < .001$, $\eta_p^2 = .05$. There was no main effect of letter condition on empathic concern, $F(2, 286) = 0.02$, $p = .976$, $\eta_p^2 = .00$, nor was there a significant interaction, $F(2, 286) = .05$, $p = .951$, $\eta_p^2 = .00$.

A significant effect of participant gender was observed such that women scored higher on personal distress ($M = 2.88$, $SD = 1.01$) than men ($M = 2.52$, $SD = 0.93$), $F(1, 287) = 9.58$, $p = .002$, $\eta_p^2 = .03$. There was no main effect of letter condition on personal distress, $F(2, 287) = 0.05$, $p = .952$, $\eta_p^2 = .00$, nor was there a significant interaction, $F(2, 287) = 1.84$, $p = .160$, $\eta_p^2 = .01$. ***Privilege and Oppression Inventory (POI).*** A significant effect of participant gender emerged such that women reported greater awareness of privilege and oppression ($M = 4.49$, $SD = .97$) than men ($M = 4.10$, $SD = 1.16$), $F(1, 287) = 8.96$, $p = .003$, $\eta_p^2 = $ .03. There was no main effect of letter condition on awareness of privilege and oppression, $F(2, 287) = .41$, $p = .665$, $\eta_p^2 = .00$, nor was there a significant interaction, $F(2, 287) = .67$, $p = .511$, $\eta_p^2 = .01$. ***Ambivalent Sexism Inventory.*** There was no significant effect of participant gender on benevolent sexism, $F(1, 287) = 1.98$, $p = .161$, $\eta_p^2 = .01$. There was no main effect of letter condition on benevolent sexism, $F(2, 287) = 1.84$, $p = .161$, $\eta_p^2 = .01$. However, a significant interaction between letter condition and gender emerged, $F(2, 287) = 3.80$, $p = .023$, $\eta_p^2 = .03$. Men scored higher on benevolent sexism ($M = 3.60$, $SD = .95$) than women ($M = 3.07$, $SD = 1.09$) in the control condition, $F(1, 287) = 6.30$, $p = .013$, $\eta_p^2 = .02$. There was no gender difference in the musician letter condition, $F(1, 287) = 1.75$, $p = .187$, $\eta_p^2 = .01$ ($M_{women} = 3.35$, $SD = 1.10$; $M_{men} = 3.06$, $SD = 0.90$), nor in the transman letter condition, $F(1, 287) = 1.63$, $p = .203$, $\eta_p^2 = .01$ ($M_{women} = 3.37$, $SD = 1.00$; $M_{men} = 3.66$, $SD = 0.91$) (See figure 3). When broken down the other way, analyses show that there was no effect of letter condition among women, $F(2, 287) = 1.72$, $p = .181$, $\eta_p^2 = .01$, but there was an effect of letter condition among men, $F(2, 287) = 3.30$, $p = .038$, $\eta_p^2 = .02$. Follow-up Tukey tests indicate that men in the musician letter condition scored lower on benevolent sexism than both men in the control condition ($p = .030$) and men in the transman letter condition ($p = .023$). There was no difference between men in the control condition and the transman letter conditions, $p = .836$.

A significant effect of participant gender emerged such that men reported more hostile sexism ($M = 3.32$, $SD = .91$) than women ($M = 2.82$, $SD = .97$), $F(1, 285) = 17.75$, $p < .001$, $\eta_p^2 = .06$. There was no main effect of letter condition on hostile sexism, $F(2, 285) = .20$, $p = .822$, $\eta_p^2 = .00$, nor was there a significant interaction, $F(2, 285) = .07$, $p = .933$, $\eta_p^2 = .00$. ***System Justification.*** A significant effect of participant gender emerged such that men reported more support for the status quo ($M = 4.06$, $SD = 1.67$) than women ($M = 3.5$, $SD = 1.58$), $F(1, 286) = 7.86$, $p = .005$, $\eta_p^2 = .03$. There was no main effect of letter condition on system justification, $F(2, 286) = 2.72$, $p = .067$, $\eta_p^2 = .02$, nor was there a significant interaction, $F(2, 286) = 2.19$, $p = .114$, $\eta_p^2 = .02$. ***Need for Closure.*** A significant effect of participant gender emerged such that women reported more need for closure ($M = 4.13$, $SD = .82$) than men ($M = 3.92$, $SD$

= .79), $F(1, 287) = 4.12$, $p = .043$, $\eta_p^2 = .01$. There was no main effect of letter condition on the need for closure, $F(2, 287) = .72$, $p = .490$, $\eta_p^2 = .01$, nor was there a significant interaction, $F(2, 287) = .37$, $p = .690$, $\eta_p^2 = .00$.

**Reactions to Coming Out.** A significant effect of participant gender emerged such that women reported more positive reactions to how parents should react to their kids coming out ($M = 5.75$, $SD = 1.17$) than men ($M = 5.18$, $SD = 1.33$), $F(1, 283) = 13.06$, $p < .001$, $\eta_p^2 = .04$. There was a significant main effect of letter condition, $F(2, 283) = 4.93$, $p = .008$, $\eta_p^2 = .03$. Follow-up Tukey tests indicate that participants in the transman letter condition reported more positive reactions to how parents should react to their kids coming out ($M = 5.77$, $SD = 1.43$) than participants in the control condition ($M = 5.29$, $SD = 1.32$) ($p = .019$). There was no difference between participants in the control condition and the musician letter condition ($M = 5.63$, $SD = 0.95$) nor was there a difference between participants in the transman letter condition and the musician letter condition ($p = .121$ and $p = .694$ respectively). There was no significant interaction, $F(2, 283) = 1.61$, $p = .201$, $\eta_p^2 = .01$.

A significant effect of participant gender emerged such that women reported more positive reactions to how they would react to their kids coming out ($M = 5.83$, $SD = 1.28$) than men ($M = 5.20$, $SD = 1.40$), $F(1, 283) = 13.46$, $p < .001$, $\eta_p^2 = .05$. There was no main effect of letter condition, $F(2, 283) = 2.22$, $p = .111$, $\eta_p^2 = .02$. However, a significant interaction between letter condition and gender emerged, $F(2, 283) = 3.09$, $p = .047$, $\eta_p^2 = .02$. Women scored higher on positive reactions to how they would react to coming out ($M = 5.85$, $SD = 1.20$) than men ($M = 4.72$, $SD = 1.46$) in the control condition, $F(1, 283) = 16.55$, $p < .001$, $\eta_p^2 = .06$. However, there was no gender difference in the musician letter condition, $F(1, 283) = 3.66$, $p = .057$, $\eta_p^2 = .01$ ($M_{women} = 5.92$, $SD = .95$; $M_{men} = 5.38$, $SD = 1.22$). There was also no gender difference in the transman letter condition, $F(1, 283) = .22$, $p = .641$, $\eta_p^2 = .00$ ($M_{women} = 5.70$, $SD = 1.65$; $M_{men} = 5.57$, $SD = 1.39$) (See Figure 4). When broken down the other way, analyses show that there was no effect of letter condition among women, $F(2, 283) = .45$, $p = .638$, $\eta_p^2 = .00$, but there was an effect of letter condition among men, $F(2, 283) = 3.85$, $p = .022$, $\eta_p^2 = .03$. Follow-up Tukey tests indicate that men in the transman letter condition and men in the musician letter condition scored higher on positive reactions than men in the control condition ($p = .010$ and $p = .039$ respectively). There was no difference between men in the transman and musician letter conditions, $p = .582$.

**Discussion**

The current study extends past research by further testing how efficacious a brief humanizing intervention is in reducing transphobia. In contrast to our hypothesis, we did not see a main effect of our manipulation on most of our dependent variables. The only dependent variable that was significantly affected by our manipulation was how participants reported parents should respond to their children coming out as transgender. Specifically, participants in the transman letter condition reported more positive responses on how parents should react to their child coming out than participants in the control condition. This positive influence could be caused by the explicitness of the transman letter condition in describing a transgender man's journey of self-discovery and the importance of having his parents support him. In turn, this could have motivated participants to acknowledge the ideal way in which a parent should react to their kid coming out. However, this manipulation may have not shifted participants' intrinsic beliefs about how they should act if their own child came out to them (Reiss, 2012). Additionally, the effectiveness of the manipulation may have not been extended to the other dependent variables because they were numerous. Although the questionnaire did include some filler questions, there was an abundance of transphobia questions which may have signaled to participants the true purpose of this study, thus leading to relatively low transphobia regardless of condition. Future research could decrease the number of prejudice-related items and add more filler questions which would lessen the likelihood of the participants figuring out the true purpose of the study.

Our exploratory hypothesis which expected differences between the musician letter condition and both the control condition and the transman letter condition was not supported. The musician's letter did not explicitly mention transgender issues in any way. Although it did highlight a difficult time that the character was going through, it did not describe the specific hardships that transgender individuals face when coming out to their parents. This piece could have been integral to triggering empathy towards transgender indi-

viduals. Thus, in this case, general empathy did not instigate a decrease in transphobia. In turn, the musician letter condition did not show the decrease in transphobic attitudes that was hypothesized to occur in comparison to the control condition.

As expected, men exhibited higher levels of transphobia, hostile sexism, and system justification than women. In addition, women exhibited higher awareness of privilege and oppression and more need for closure in comparison to men. Women also scored higher than men on all facets of the Interpersonal Reactivity Index including perspective-taking, fantasy, empathy, and personal distress. Women had warmer feelings towards transgender men and transgender women than men. In contrast to men, women reported more positive reactions to how parents should react to their kid coming out as well as how they would react to their kid coming out. These results are in alignment with our hypothesis and previous literature (Tompkins et al., 2015; Tebbe & Moradi, 2012; Glick & Fiske, 1996) that men would have more negative responses across all dependent variables than women. These findings are consistent with the fact that men tend to hold more power in society compared to other gender identities, benefit from maintaining the status quo, and therefore feel more threatened by non-normative experiences (West & Borras-Guevara, 2021). However, there was no gender difference between men and women when it came to feelings towards non-binary individuals, attitudes towards transgender individuals, and inclusion of others in self. The lack of difference in feelings towards non-binary individuals might be due to a lack of awareness, interaction, and knowledge about non-binary folk (Fiani & Serpe, 2020). Additionally, participants may have had a difficult time with answering the inclusion of others in the self scale as it asks them to rate how close they are to transgender individuals without clarifying what closeness refers to. Participants could have thought that this question asked them to signify how close they feel to the transgender identity, or how closely they feel towards transgender people. The attitudes towards transgender individuals scale might have not triggered a gender difference because it was the second scale measuring transphobia within the survey. Thus, perhaps some participants were made aware of the true purpose behind the study, making them concerned about social desirability.

No interaction between participant gender and

letter condition was obtained on transphobia, attitudes towards transgender individuals, feelings towards transgender individuals, inclusion of self, empathetic concern and personal distress, hostile sexism, system justification, need for closure, or how parents should react to their kid coming out. In contrast, a significant interaction between participant gender and letter condition emerged on the perspective-taking subscale of the IRI which measures the tendency to imagine oneself in another person's situation and see things from their perspective. Women reported higher perspective-taking than men in both the control condition and the musician letter condition but not in the transman letter condition. This suggests that the transman letter condition affected perspective-taking such that it eliminated the standard gender differences obtained in the control condition and the musician letter condition. The transman letter condition explicitly explains how difficult it had been for the transgender man to go through life without being seen as a man. Male participants may have related to that feeling which encouraged them to put themselves in another person's shoes. Furthermore, there was a significant interaction on the fantasy subscale of the IRI which measures people's tendency to imagine themselves in fictional situations. Women scored higher than men in the control condition but there was no difference in the other two conditions. This finding suggests that both the musician and transman letter conditions are able to affect the gendered differences between men and women and their ability to imagine themselves in a situation they would usually not be in. The vulnerability present in both these letters may have encouraged men to step into a fictional situation. In addition, an interaction between participant gender and letter condition emerged on how participants would react to their kids coming out. Women reported more positive reactions in the control condition than men, but there was no gender difference in the other two conditions. This finding again suggests that the musician letter and the transman letter conditions eliminate the gender differences obtained in the control condition. Both the musician and transman letters showcased vulnerable experiences which may have influenced participants to take into consideration the characters' hardships and eliminated typically seen gender differences in would reactions to coming out. A similar interaction was also obtained on benevolent sexism, which is a subter form

of sexism expressed in a seemingly positive light, there is an interaction between gender and letter condition. Men scored higher on benevolent sexism in the control condition than women but there was no gender difference in the musician letter condition and the transgender letter condition. The results suggest that the levels of benevolent sexism decrease in men when subjected to reading a letter. Both letter conditions highlighted the vulnerability of two young men during a hard time in their lives which could have consequently decreased men's benevolent sexism scores. Since both letters showcased the struggle of two men, they may have led male participants to be less likely to endorse traditional gendered beliefs that are seemingly positive towards women (Manzi, 2019).

Overall, the current work has a number of strengths. Firstly, it is important to test the efficacy of brief humanizing interventions with the presence of an independent control condition. The control condition acts as a reference to the other two conditions and is essential to get an understanding of the true effect of interventions like reading a coming-out letter on transphobia outside of studies with set pre- and post-tests. Previous literature (Tompkins et al., 2015; Case & Stewart, 2013; Mizock et al., 2017), uses pre-tests that tells participants something about the purpose of the study and increases social desirability bias. This study did not have a pretest condition, thus reducing the likelihood that participants are aware of the purpose of the study before experiencing the manipulation, and thus motivated to answer questions in a particular manner that is desirable to researchers. Moreover, an appropriately large sample size (N=302) was determined by running a priori power analysis and recruitment. This study was able to obtain a larger and more diverse sample than prior research by using MTurk recruitment. In comparison to previous studies (Walch et al., 2012; Tompkins et al., 2015), which utilized students as their participants, our participants had more varied life experiences. The mean age of our participants was approximately 35 and 37.1% of our participants had completed some level of college, 30.8% had various educational levels, and 14.9 % had a Master's degree. Our sample reported relatively moderate political views ranging from conservative (26.2%) to moderate (37.8%) to liberal (56%). Previous literature used undergraduate samples (Tompkins et al., 2015; Case & Stewart, 2013; Walch et al., 2012), which

typically skew more liberal politically (Campbell & Horowitz, 2015). Thus, this study offers a more politically diverse participant sample. Another strength of our current work was our manipulation check data, which showed that participants were generally attentive and understood their respective letter conditions.

Although the current study had a number of important strengths, there are also weaknesses that can be addressed in future research. The current sample was not racially diverse. 65.2% of our participants identified as White/Caucasian. Previous research (Case & Stewart, 2013) has demonstrated higher rates of transphobia in people of color prior to interventions. Thus, future research may explore the interaction of racial identity with humanizing interventions intended to reduce transphobia. Future studies may find that humanizing interventions have a greater effect on people of color who previously had higher rates of transphobia. Cisgender men have previously had higher levels of transphobia than cisgender women. Humanizing interventions were able to eliminate some of the gendered differences between them (Hodson, 2011). Thus, a similar effect may occur with participant race. Also, the vast majority (97.1%) of our participants identified as either men or women; there were few non-cisgender and non-binary participants. Further research may attempt to recruit a more gender-diverse participant population and study potential internalized transphobia. Internalized transphobia is when transgender individuals internalize the negative outlook and normative gender attitudes that society has put in place (Scandurra et al., 2018). Future research could look into the effect of humanizing interventions on internalized transphobia and whether empathy can decrease internalized transphobia. Transgender individuals might empathize with the representations in humanizing interventions and see that their own struggles are valid. This empathy might extend to themselves thus decreasing their internalized transphobia. Additionally, future studies could explore the efficacy of a humanizing intervention by comparing the effect of letters written by people of different gender identities: transgender women, transgender men, and non-binary individuals. Participants may have different preconceived biases towards people with these gender identities and the humanizing interven tion could affect participants differently depending on what condition they are exposed to. Although there

is not much research on whether attitudes towards transmen, transwomen, and gender non-binary people differ, there is good reason to expect their lived experiences to be different, as transgender women have been subjected to higher rates of gender-based violence (Gyamerah et al., 2021). Additionally, people have less awareness of non-binary individuals (Fiani & Serpe, 2020) which could increase people's transphobia. People are generally wary of the concepts and things that they do not know (Carleton, 2016) which in turn may affect people's attitudes towards non-binary individuals. Humanizing interventions that would include these gender identities might elicit greater reductions in transphobia levels towards transgender women versus transgender men and non-binary individuals because of the high rates of violence towards them. Moreover, future research could decrease the number of dependent variables within the study and add more filler questions in order to decrease potential social desirability bias. It would also be beneficial to also look at how long the effects of a humanizing intervention last through a longitudinal study. Brief humanizing interventions might have a temporary effect on people's prejudice towards transgender individuals, especially if the intervention was only administered once.

In sum, this brief humanizing intervention did not have the direct impacts on transphobia that were initially predicted. Unlike prior research which found more support for the effectiveness of brief humanizing interventions, this study included the general population instead of university students. Additionally, this study reduced participant suspicion by implementing a control condition. Thus, our findings suggest that prior research may have painted a rosier picture of the ease with which humanizing interventions can reduce transphobia. However, our findings still suggest that humanizing interventions may have promising effects. For example, we found that our manipulation influenced participants' outlook on how they think parents should react to their kid coming out to them, signifying that participants believed parents should react in less transphobic ways to their kid coming out. Thus, future research using humanizing interventions is needed to better understand the extent to which they can be effective in reducing transphobia and improving the livelihoods of transgender individuals.

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**Table 1**

*Demographics of Participants*

|  |  | Percentage |
|---|---|---|
| Gender |  |  |
|  | Cisgender Male | 32.5 |
|  | Cisgender Female | 64.6 |
|  | Transgender Male | 0.7 |
|  | Transgender Female | 0.0 |
|  | Gender Non-Binary | 1.0 |
|  | Other | 0.3 |
| Age |  | $M$=35.53; $SD$= 12.04 |
| Race/Ethnicity |  |  |
|  | White/Caucasian | 70.9 |
|  | African American | 13.6 |
|  | Asian/Pacific Islander | 7.5 |
|  | Hispanic | 6.4 |
|  | Native American/Native Alaskan | 0.3 |
|  | Other | 0.3 |
| Sexual Orientation |  |  |
|  | Asexual | 1.7 |
|  | Bisexual | 12.3 |
|  | Heterosexual | 74.4 |

| | | |
|---|---|---|
| | Other | 0.7 |
| **Political affiliation** | | |
| | Republican | 22.5 |
| | Independent | 30.0 |
| | Democrat | 39.2 |
| | Other | 6.5 |
| **Education Level** | | |
| | Some High School | 1.0 |
| | High School/GED | 12.6 |
| | Some College | 37.2 |
| | Bachelor's Degree | 31.1 |
| | Master's Degree | 14.7 |
| | Advanced Graduate work or Ph.D. | 3.4 |

**Table 2**

*The Distribution of Male and Female Participants in Each Condition*

| Condition | Number of participants | Male Percent | Female Percent |
|---|---|---|---|
| Control Condition | 101 | 36.7 | 33.3 |
| Musician Letter Condition | 101 | 32.7 | 35.4 |
| Transman Letter Condition | 91 | 30.6 | 31.3 |

**Figure 1**

*The Effect of Gender and Letter Condition on IRI-Perspective-Taking*
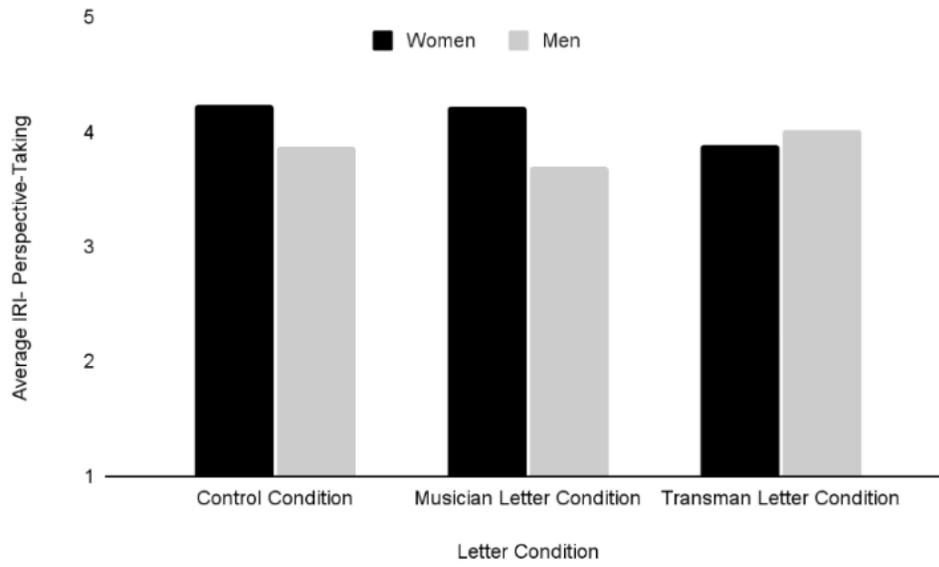
**Figure 2**

*The Effect of Gender and Letter Condition on IRI-Fantasy*
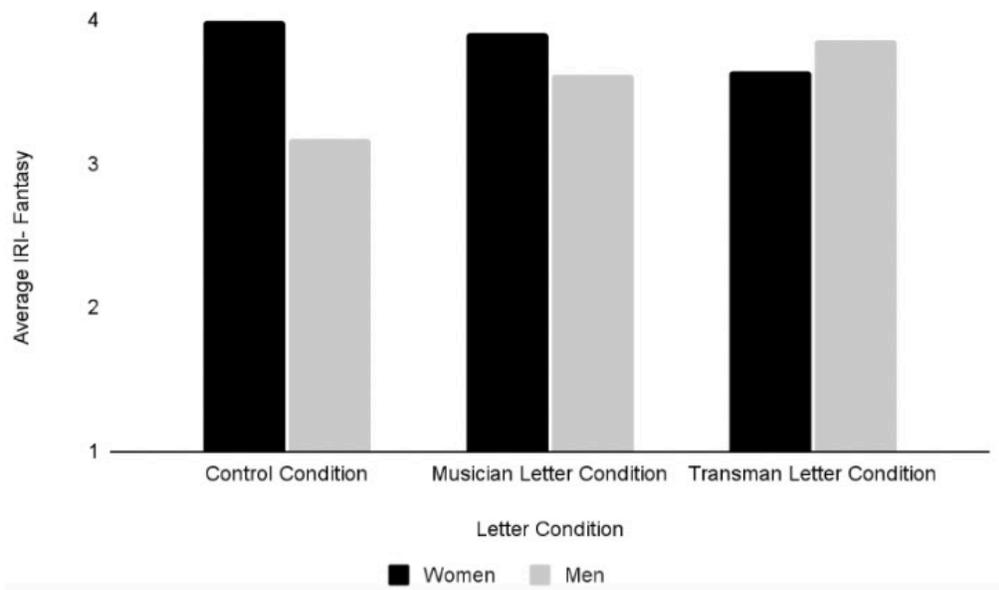
**Figure 3**

*The Effect of Gender and Letter Condition on Ambivalent Sexism*
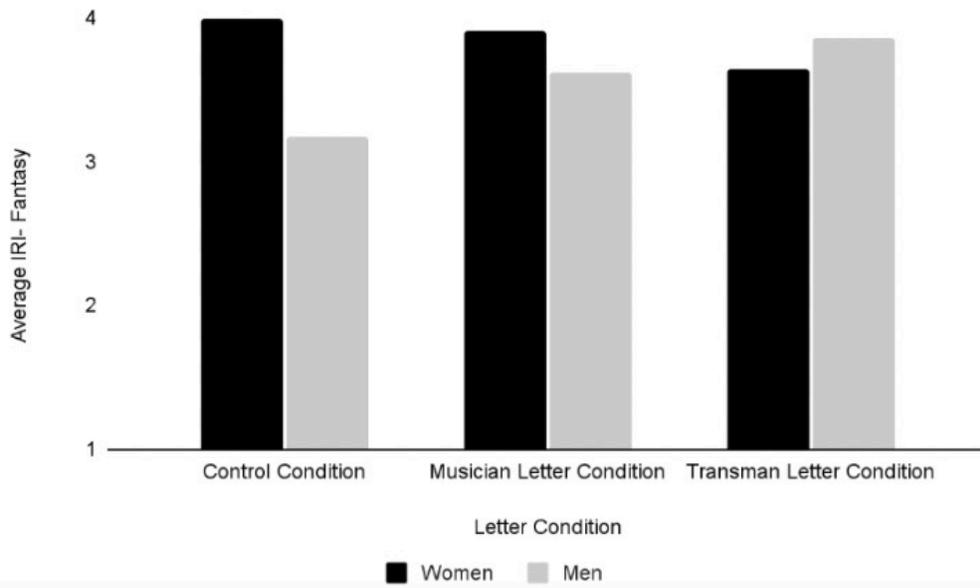
**Figure 4**

*The Effect of Gender and Letter Condition on Would Reactions*
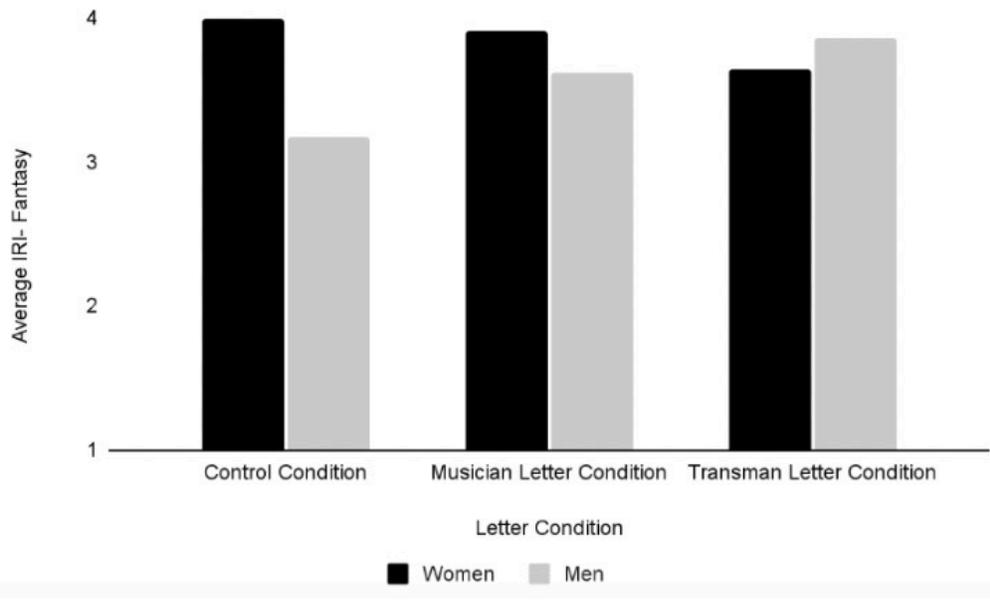
## Appendix A

### Musician Letter

Dear Mom and Dad,

I have something very important to tell you about myself. You might not approve of it, but please try to keep an open mind as I try to explain this. Also, please understand that what I'm about to tell you is not your fault. So whatever you do, please don't blame yourselves.

I know you've wondered why I've never had a girlfriend. You might have noticed that I spend most of my time with my "buddies." Well, I'm not slacking off, but I have actually been in a band. You see, my current major doesn't match the way I see myself. Mom and Dad, I feel that I am a musician. You might not see this for me, but I know I am a musician. It's what comes naturally to me. I have felt this way for as long as I can remember. I know you thought I was just messing around with my guitar, but it went much deeper than that.

At the age of four, I remember thinking that I was a rockstar. Then, I learned that musicians make music for a living. So I waited for the opportunity to pursue music. Obviously, it never came.  So every night, I asked God to please let me become a musician. It hasn't happened yet.

Up until age twelve, things were just OK. I had some really good times with my buddies, but I was very sad and lonely knowing that I would soon have to give this all up to go to college. Then in high school, things got a lot worse. There were so many things I wanted to do but couldn't. There were band practices that I had to miss, but I had to keep my feelings locked up inside. I always had to pretend to be someone I wasn't. I couldn't just be myself. You have no idea how hard it was for me to try to act like I wanted to become a doctor. It was extremely  difficult for me! To this day, it really tears me up inside! For the longest time, I had been deeply unhappy with my major- the life plan I am supposed to want. But no matter what I did or how hard I worked, I could never feel passionate about medicine. At one time, I felt so unhappy that I had to call an emergency hotline because I didn't know what else to do.

Every day is a struggle for me because I know I have to play a role I'm not comfortable in. It stresses me out so much! I'm sick and tired of the whole charade! At school, I present a cheerful image So they expect me to be all dedicated to my academic journey and happy. They're used to seeing me with a smile on my face all the time. If only they knew the pain and torture I'm going through!

Well, Mom and Dad, what I'm trying to say is that I am going to quit college and start my music career. Now, you don't have to understand me, but please try to accept me. I can't be who you want me to be. I've got to do what I know is right for me—not what anyone else might think is right. Your support during this chapter of my life would mean the world to me.

Mom and Dad, you've been so good to me. I just want to thank you for all you've done for me. I feel truly blessed to have parents like you. I love you. Please don't ever forget that, no matter what.

With love,
Adam

**Appendix B**

**Transgender Letter**
**Edited from Case, K. A., Stewart, B. (2013)**

Dear Mom and Dad,

I have something very important to tell you about myself. You might not approve of it, but please try to keep an open mind as I try to explain this. Also, please understand that what I'm about to tell you is not your fault. So whatever you do, please don't blame yourselves.

I know you've wondered why I never had a boyfriend. You might have noticed that all of my guy friends are more like my "buddies." Well, I'm not a lesbian, but I am very much attracted to women. You see, my body doesn't match the way I see myself. Mom and Dad, I feel that I am a man. My body might tell you the opposite, but I know I am a man. It's what comes naturally to me. I have felt this way for as long as I can remember. I know you thought I was just a tomboy, but it went much deeper than that.

At the age of four, I remember thinking that I was a boy. Then I learned that boys have a penis. So I waited for mine to grow. Obviously, it never did. So every night, I asked God to please change my body into a male body. It hasn't happened yet.

Up until age twelve, things were just OK. I had some really good times with my buddies, but I was still very sad and lonely. Then in high school, things got a lot worse. There were so many things I wanted to do but couldn't. There were girls that I really liked and cared about, but I had to keep my feelings locked up deep inside. I always had to pretend to be someone I wasn't. I couldn't just be myself. You have no idea how hard it was for me to try to act like a girl. It was extremely humiliating for me! To this day, it really tears me up inside! For the longest time, I had been deeply unhappy with the body I am in- the body I am supposed to feel comfortable in. But no matter what I did or how hard I worked out, I could never feel at home in my own skin. At one time, I felt so unhappy that I had to call an emergency hotline because I didn't know what else to do.

Every day is a struggle for me because I know I have to play a role I'm not comfortable in. It stresses me out so much! I'm sick and tired of the whole charade! At work, I present a cheerful image. So they expect me to be all feminine and happy. They're used to seeing me with a smile on my face all the time. If only they knew the pain and torture I'm going through!

Well, Mom and Dad, what I'm trying to say is that I am going to begin my gender transition into the body that I truly feel comfortable in. Now, you don't have to understand me, but please try to accept me. I can't be who you want me to be. I've got to do what I know is right for me—not what anyone else might think is right. Your support during this chapter of my life would mean the world to me.

Mom and Dad, you've been so good to me. I just want to thank you for all you've done for me. I feel truly blessed to have parents like you. I love you. Please don't ever forget that, no matter what.

With love,
Alice (soon to be known as Adam)

## Appendix C

### Reactions to Coming Out
### (Using data from Wren, 2002)

Rate the following statements according to your degree of agreement or disagreement using a 7-point scale ranging from 1= strongly disagree to 7 strongly agree

Adam's parents should…
- Support Adam completely- even if they do not understand him
- Tell Adam that he is not mature enough to make such major decisions
- Take Adam to see a specialist and change his mind
- Get the proper professional help to support Adam and his decisions
- Accept Adam

If you were Adam's parent, you would…
- Support Adam completely- even if you do not understand him
- Tell Adam that he is not mature enough to make such major decisions
- Take Adam to see a specialist and change his mind
- Get the proper professional help to support Adam and his decisions
- Accept Adam