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The Effects of Imagined Intergroup Contact on Attitudes Towards Male Bisexuals

An Honors Thesis submitted in partial fulfillment of the requirements for Honors in Psychology

By
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Under the mentorship of Dr. Amy Hackney

ABSTRACT

Bisexual men regularly face prejudice from both heterosexual and homosexual individuals. These negative attitudes put stress on bisexual individuals that is associated with increased risk of mental illness, especially depression and suicide. There are currently no strategies with sufficient support from the literature to reduce this sexual prejudice. Imagined intergroup contact is a method used to reduce prejudice against an outgroup by asking people to imagine interacting with a member of an outgroup. The purpose of this research was to determine whether imagined intergroup contact was an effective intervention for reducing prejudice against bisexual men. Participants were randomly assigned to either the imagined contact group, in which they closed their eyes and imagined meeting a bisexual man for the first time from a third person perspective, or the control group, in which they imagined a nature scene. Participants then reported their intergroup anxiety, outgroup evaluation, perceived outgroup variability, attitudes towards bisexual men, and future intended contact. Results showed that there was no significant difference between the imagined contact group and the control group on any of the dependent measures. The effect of the imagination task, however, was moderated by participant gender. Although women had more favorable outgroup evaluations than men in the control group, there were no gender differences in outgroup evaluations in the experimental group. These results have implications for the effectiveness of the imagined intergroup contact method, as well as the way that gender influences sexual prejudice.

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The Effects of Imagined Intergroup Contact on Attitudes towards Male Bisexuals

Members of the LGBT (lesbian, gay, bisexual, and transgender) community are frequently targeted for prejudice by heterosexuals. This hostility can become a cause of great stress to these individuals and is associated with an increased chance of mental illness, particularly depression, and suicide (Meyer, 2013). People who label themselves as bisexual are attracted to people of both genders (Rust, 2002). Sexual prejudices are defined by Herek as “negative attitudes toward an individual because of her or his sexual orientation” (2003). Bartos et al. notes that there are currently no strategies with sufficient support from the literature to reduce this sexual prejudice (2014). Bisexual men are considered the least acceptable of lesbians, gay men, bisexual men, and bisexual women (Eliason 1997). Imagined intergroup contact is a strategy created to reduce prejudice against outgroups by having participants visualize interacting with a member of an outgroup (Crisp and Turner, 2009). This research aims to discover if imagined intergroup contact can be an effective intervention for reducing prejudice against bisexual men.

Self-identified bisexual individuals are attracted to more than one gender. There are many other individuals who have participated in sexual acts with individuals of more than one gender that may not identify as bisexual, which can make it hard to quantify the percentage of the population that is bisexual (Rust, 2002). Bisexual individuals may be in a unique situation, as they are often looked at negatively by both homosexuals and heterosexuals, who often label their sexuality as something impossible. However, Mohr and Rocholen (1999) found that gays and lesbians were more tolerant of bisexuality than heterosexuals, with lesbians being the most tolerant of both bisexual women and men (as cited in Worthen, 2013). Worthen (2013) notes that prejudice and discrimination are more greatly reduced when efforts to reduce them are focused

on the threats and anxieties related to the specific targets. Because it is likely that the origins of prejudice towards gays, lesbians, bisexual men, bisexual women, female to male (FtM) and male to female (MtF) transgendered individuals are different, it is important to evaluate attitudes towards them separately. There has only been published research about bisexuality starting in 1981.

Attitudes

Because bisexuals are usually discriminated against by heterosexuals, it is important to understand their attitudes and ideas about bisexuals before we can improve the situation. The way that heterosexual women view bisexuals of each gender and the way that heterosexual men view bisexuals of each gender are different.

Eliason (1997) wanted to collect more data about heterosexual students' attitudes towards bisexuality. The research on attitudes towards bisexuality prior to this study was very little, due to the fact that so many people viewed sexual orientation as dichotomous, with people being either heterosexual or homosexual. Therefore, bisexuality was not considered a valid sexual orientation. There had been previous studies about homophobia, but little research specifically on bisexuals. Eliason (1997) noted that stereotypes about bisexuals include that they are confused, that they are not brave enough to come out as their true sexuality, that they spread AIDs to heterosexuals and lesbians, that they are promiscuous and non-monogamous, and that they are obsessed with sex.

A group of 229 heterosexual students taken from a pool of two undergraduate psychology courses anonymously filled out surveys. These surveys asked about demographics, attitudes and experiences with bisexuals, gay men, and lesbians, the Beliefs about Sexual Minorities Scale (BSM), and statements depicting common stereotypes about bisexuals that participants could

either agree or disagree with. Most participants indicated that they did not have any bisexual friends or acquaintances, and that they had little to no knowledge about bisexuality. Bisexual women were seen as more acceptable than bisexual men. Similarly, gay men were seen as less acceptable than lesbians. Bisexual men were rated as least acceptable, than gay men, than lesbians, and bisexual women were rated as most acceptable. A majority of students said that it was very unlikely that they would enter into a sexual relationship with a bisexual individual they were really attracted to. Most participants agreed with the stereotypes that bisexuals had more flexible attitudes about sex, and that bisexual rights were the same as gay and lesbian rights. They disagreed with the statements that bisexuals were more well adjusted than heterosexuals or gays/lesbians, that bisexuals were gays or lesbians who were afraid to come out and that bisexuals have the best of both worlds.

There was no difference in the likelihood that women or men would have bisexual friends or acquaintances, but men were more likely to state that they would have a sexual relationship with a bisexual woman. Men were more likely to agree than women with the statements that “bisexuals tend to have more sexual partners than heterosexuals”, “bisexuals tend to have more sexual partners than gays/lesbians,” “bisexuals are more likely to have more than one sexual partner at time than heterosexuals,” “bisexuals are gays/lesbians who are afraid to admit they are gay”, and that bisexuals spread AIDS to lesbians and heterosexuals.” Men were more likely to disagree than women that “bisexuals are less accepted in society than gays/lesbians”. Heterosexual men gave more negative ratings compared to heterosexual women to all sexual minorities except bisexual women. Eliason found that predictors of negative attitudes towards bisexual women were less bisexual friends and acquaintances, being of a younger age, conservative religion, and homophobia. These factors also predicted negative attitudes towards

bisexual men, but also included male gender as a predictor. Overall, it seemed that participants knew very little about bisexuals and many were not acquainted with any bisexual individuals. Bisexual men were rated more negatively than bisexual women, who were rated as acceptable by half of the participants and unacceptable by the other half.

Herek (2002) was also seeking to gather more information about heterosexuals' attitudes towards bisexual men and women separate from attitudes towards lesbians and gay men. Herek reasoned that because bisexuals often form heterosexual relationships, they might be less discriminated against than homosexuals, and when they are discriminated against it may partially be because they are perceived to be homosexual. However, because many people believe that bisexuals transmit HIV into the heterosexual population and are often regarded as promiscuous and non-monogamous Herek (2002) believed it is also possible that they may face greater opposition than homosexuals.

Approximately half of participants were participants from a previous study that had agreed to be re-contacted for a follow up interview and the other half were new participants, which totaled to 1335 participants. The participants were called for phone interviews in which they were given a 101-point feeling thermometer towards bisexual men and women which were embedded in feeling thermometers that included religious groups, gay people, people who inject illegal drugs, people with AIDS, racial, ethnic, and national groups, bisexuals, and groups defined by their stance on abortion rights.

Herek (2002) found that heterosexual women were found to rate bisexual women less favorably than lesbians, and rate bisexual men less favorably than gay men. Heterosexual men rated bisexual women and lesbians higher than bisexual men and gay men. Negative attitudes toward bisexuality were correlated with less education, higher age, lower annual income,

residence in Southern and rural locations, higher religiosity, political conservatism traditional value concerning gender sexual behavior, authoritarianism, and lack of contact with gay men and lesbians.

Yost and Thomas (2012) began their research because there was limited literature on prejudiced attitudes towards bisexuals through the lens of the effect of the relationship between the gender of the participant and the gender of the bisexual individual on the participants' attitude. The researchers noted that there has been a documented relationship between gender and homonegativity in previous literature. Women tend to be more accepting of sexual minorities than men. Gay men are seen as violating gender norms, while lesbian women are not, so gay men are often viewed more negatively. Heterosexual men may also have more positive attitudes towards lesbians because they eroticize them.

The participants were asked two open-ended questions, "When you think of a bisexual woman, what comes to mind?" and "When you think of a bisexual man, what comes to mind?" and Thomas (2012) asked these open-ended questions designed to find beliefs that might not be in the scale that followed and might reveal relationships between the rater's and target's sex. Yost and Thomas (2012) modified the preexisting Biphobia Scale by Mulick & Wright (2002) to specify the gender of the bisexual target and called it the Gender-Specific Binegativity Scale (GSBS) with a version about bisexual women and bisexual men. Both were presented and were counterbalanced. After completing the GSBS, the participants answered items regarding how often they viewed pornography. They were asked how arousing they found or thought they would find, seven different pornographic themes, depending on how often they viewed pornography, ranging from never to regularly. Included was the item "A woman having sex with another woman", which was the variable used to measure the eroticization of lesbian sex.

Attitudes towards bisexual men were more negative when participants completed the GSBS-Men first. Attitudes about bisexual women were not significantly different when considering order. Participants were more positive towards bisexual women than bisexual men. Women had more positive attitudes towards bisexuals than men. Female participants had equally positive attitudes towards bisexual women and men, and with male participants being more positive towards bisexual women than men. Yost and Thomas (2012) also found that Rater's Sex significantly predicted the eroticization of lesbian sex. As predicted, men eroticized lesbian sex more than women did. The eroticization of lesbian sex was found to significantly predict the GSBS Difference Score. Greater eroticization scores were associated with larger difference scores, with binegativity being greater towards males than females. After accounting for Eroticization of Lesbian Sex, the connection between the Rater's Sex and the Difference Score was not completely eliminated.

In regards to the open ended questions, the Yost and Thomas (2012) sorted the participants' answers into categories: Definitions, Doubting Bisexuality, Gender Nonconformity, and Positive and Negative Attributes. Women were more likely to respond with a definition than men were regarding both bisexual men and bisexual women. Participants were overall more likely to doubt a bisexual man's orientation than a bisexual woman's orientation. Participants were more likely to view bisexual men as being "really gay" and bisexual women as being "really heterosexual". Only bisexual women were coded as "wanting attention". Participants were more likely to rate male bisexuals as being more gender nonconforming, and participants of both genders were equally probable to rate bisexuals as gender nonconforming. Participants described female bisexuals as having more positive characteristics than males.

Overall, male bisexuality is looked upon with much more negativity than female bisexuality. It seems that many participants believe that bisexual men are truly homosexual, and that they are lying or in denial about their sexuality. Bisexual men were also deemed more gender nonconforming than bisexual women, and Yost and Thomas (2012) noted that previous research indicates that some expressions of masculinity by females are more acceptable than feminine displays from males, which would result in a more negative response to bisexual men. On the other hand, bisexual women are often thought to be seeking attention and actually were heterosexual. Yost and Thomas (2012) believed that this may imply that bisexual receive some sort of heterosexual privilege that bisexual men do not. Men expressed more binegativity than women did. Yost and Thomas (2012) assert that this may be due to the influence of gender roles. It might also be related to men's view of their sexuality as more static. Men are also more likely to subscribe to social dominance orientation, where there is a social hierarchy, which could result in greater binegativity. Yost and Thomas (2012) findings were consistent with previous findings with heterosexual men and women's attitudes towards gay men and lesbian women.

Functions of Prejudice

Many possible reasons have been attributed to why heterosexuals are often prejudiced against bisexual individuals including that they are perceived as violating gender norms, that they threaten heterosexuals' sexual identity, that they are perceived as threatening to traditional family values, they are displaying unwanted sexual interest, or simply that they are members of the "outgroup."

However, recent research shows that the function of this prejudice against LGB individuals is largely because of unwanted sexual interest. Pirlott and Neuberg (2014) were interested in determining what the function of sexual prejudice towards lesbians, gays, and

bisexuals. They hypothesized that heterosexuals are prejudiced towards nonheterosexuals because they want to avoid unwanted sexual contact. They also wanted to examine how three alternative hypotheses, in-group out-group heterosexism hypothesis, gender-norm violation hypothesis, and sexual identity hypothesis, compared to the unwanted sexual interest hypothesis. Pirlott and Neuberg (2014) explained that heterosexual women are more reluctant to enter relationships that do not have a high probability of becoming long term because there is a relatively high cost involved for them. Therefore they would view undesirable long-term partners negatively. Lesbian women and bisexual women are not sexually compatible, and bisexual men may be viewed as unsuitable sexual partners due to the stereotype that they are promiscuous, unable to be satisfied by only women, or would otherwise serve to be poor long term partners. Conversely, because heterosexual men have a relatively low cost associated in entering a sexual relationship, they are much less reserved in choosing sexual partners. Therefore, they are likely to view those who would they would have sex with favorably, which includes any woman they found attractive, regardless of sexual orientation. They would also view other heterosexual males favorably, because they are mutually disinterested in each other. However, gay and bisexual men would be viewed negatively because sexual interest from them would be unwanted.

Pirlott and Neuberg (2014) performed three separate studies, the first of which examined beliefs about straight men, straight women, bisexual men, bisexual women, gay men, and lesbians. The participants were asked to report how they perceived the sexual interest of each of the target groups and report their own sexual and romantic interest in each of the target groups on a scale from one to nine. In the second study, the researchers asked participants to rate how negatively they felt toward each of the six target groups from study one. Study three followed the

same design and procedure as studies one and two, but operationalizing negativity as a single item and adding gender-role violation and sexual identity threat perception assessment.

The results of the first study were that women believed all of the target groups to be sexually interested in women except for heterosexual women and gay men, and that men believed all target groups to be interested in heterosexual men except for heterosexual men and lesbians. Women were uninterested in all targets except for heterosexual men, but men were interested in all female targets rather they were compatible or not. Women perceived unwanted sexual interest from bisexual women, lesbians and bisexual men. Men perceived unwanted sexual interest from gay men and bisexual men, and a lack of reciprocation in sexual interest from lesbians. Results from the second study found that bisexual, gay, and lesbian targets had stronger negativity scores than heterosexual targets. Unlike alternative models, the unwanted sexual interest model had the same pattern of negativity toward sexual orientation. In the third study general negativity and unwanted sexual interest were closely replicated. Nonheterosexual targets were found to violate gender-roles more than heterosexuals, and males were perceived as violating gender-roles more often than females. Males also perceived higher levels of gender norm violations than women. Bisexual women and lesbians were perceived as a greater sexual identity threat to heterosexual women than gay men, bisexual men, and heterosexual women. Heterosexual men perceived gay men and bisexual men as the greatest sexual identity threat, but heterosexual men were perceived as threatening sexual identity as much as bisexual female targets. The researchers found that while perceived unwanted sexual interest strongly mediated the degree to which sexual orientation groups elicited negativity, perceived sexual identity threat could not account for differential negativity towards the target orientation groups.

The pattern of negativity towards targets showing unwanted sexual interest mirrored the general negative prejudice of heterosexual college students. The researchers were able to conclude that in-group out-group heterosexism, gender-role violation, and sexual identity threat did not match the pattern of general negativity, though they did have meaningful interactions, did not account for the pattern of general negativity. The researchers proposed that unwanted sexual interest is a causal factor in sexual prejudice, as it is logically unlikely that it is due to reverse causality. Pirlott and Neuberg (2014) also proposed that because sexual interest is high and salient among college students, unwanted sexual interest is likely to be a stronger predictor of sexual prejudice than it might be for those at different life stages. With this Affordance-Management approach, for example, young parents might be particularly concerned with socialization practices, and may see nonheterosexuals as threatening socialization.

Interventions to Reduce Prejudice

Lehmiller, Law, and Tormala's (2010) findings point toward there being some connection between thinking about traditional family values and negative attitudes towards homosexuality. Lehmiller et al. (2010) were testing a new approach to diminishing sexual prejudice by incorporating self-affirmation techniques on heterosexual participants. They noted that previous research has shown that real or imagined contact with lesbian women and gay men reduces sexual prejudice. Self-affirmation had been shown to reduce some forms of prejudice by reinforcing feelings of self-adequacy in an area unrelated to the source of the threat. However, these results did not apply to men who had self-affirmed their masculinity in relation to the amount of prejudice they felt towards gay men, possibly due to the fact that a lack of masculinity and homosexuality are often equated to each other. Lehmiller et al. (2010) thought that if participants affirmed the parts of themselves that were tied to such categories as religion,

morality, or family, their sexual prejudice would be more intense. They also hypothesized that sexual prejudice would be reduced if the participants affirmed a part of their self that wasn't related to their feelings about homosexual men and women.

Lehmiller, Law, and Tormala (2010) executed three different studies. In the first study Lehmiller et al. (2010) asked the participants to rank eleven values from most important to least, and then write about either why their most important value had significance for them, or the value that ranked ninth on their list might be important for a college student. They were also given ten items from the Attitudes toward Lesbians and Gay Men Scale, ten items from the Religious Fundamentalism Scale, five items from the Conservatism-Liberalism Scale, and a demographics questionnaire. In the second study, participants were randomly assigned to either affirm the "family/friends" value, affirm "sense of humor" (sense of humor was selected because it was ranked first second most often after family/friends), or a control condition where they did not self-affirm. They wrote about why "family/friends" or "sense of humor" was important to them in the affirming condition. In the non-affirming condition they wrote about why creativity might be important to the average college student. The participants were given the same sexual prejudice measures, religious fundamentalism measures, political conservatism measures, and demographics questionnaire as they were in the first study. In addition, they were assessed for sexual orientation group identification and internal and external motivation to control prejudice. For study three, the affirming manipulations were the same as in study two, but the control group was dropped. The participants were given the same sexual prejudice measures, religious fundamentalism measures, political conservatism measures, and demographics questionnaire as they were in the previous studies. They were also given traditional family values measures with

three subscales of parent-child relationships, husband-wife relationships, and female-male gender roles.

For the first of their three studies, Lehmler et al. (2010) found that participants who ranked family/friends as their most important value scored high on religious fundamentalism. They were also shown to be significantly more prejudiced than those who affirmed a different value. Men were more sexual prejudiced than women. In the second study the researchers found that participants showed significantly less sexual prejudice when they affirmed sense of humor compared to affirming the value of family/friends, but there was not a significant difference between those who affirmed family and friends and those who were in the non-affirmed condition. The experimental conditions did not affect religious fundamentalism, political conservatism, internal or external motivation to control prejudice, sexual orientation group identification, or participant gender, nor did these variables influence the effect of the condition on sexual prejudice. The third study affirmed the findings of the previous two studies, and additionally found that affirming family/friends mediated the amount of prejudice towards homosexuals, most likely because it lead participants to endorse traditional family values more.

Buck and Plant (2011) asserted that because a person's sexual orientation is often not immediately apparent, unlike someone's race or gender, the timing and manner in which it is disclosed could affect how heterosexuals view LGB people. Previous research suggested that both primacy and recency effects could have an impact on how LGB people are received depending on when they disclose their sexual orientation. Buck and Plant (2011) wanted to see if they could reduce prejudice towards a confederate who disclosed that they were gay.

Buck and Plant (2011) performed two studies. In the first study participants were told that they were participating in a study on individual experiences in first-time interactions. They were

told that they would be meeting another participant in a different room, but before they met they were told they would be given information about their partner via an audio recording of an interview. The interviewee was actually a male confederate answering a series of scripted questions. The interviewee revealed that he had a boyfriend in response to a question about his relationship status either early or late in the interview depending on the condition. Afterwards the participants were asked about how they were feeling about interacting with the confederate. They were also asked to respond to a series of items about their attitudes towards homosexuality. They were told that they would not be interacting with the partner and were debriefed. In the second study, participants were also told that they were taking part in a study on individual experiences in first time social interactions. This time they were told that they would exchange information with another participant via a video recorded interview. The participant they viewed was a confederate who either disclosed that he was straight early, that he was gay early, that he was straight later, or that he was gay later. After they viewed the interview they were told that they were going to be doing a “word builder” task with their participant. They were told that their partner would earn twenty-five cents for every word that he made. The participant could either help their partner by giving them common letters or hurt their partner by giving them uncommon letters. The “word builder” task was used as a measure of hostile behavior. After they completed the “word builder” task they were asked to rate their attitudes toward their partner, a measure that assessed how stereotypically they viewed their partner, and how they felt about their future meeting with their partner. They were told that they would not be interacting with the partner and were debriefed.

Male participants were more frustrated about having to interact with the partner and more likely to want to avoid interacting with the partner if they disclosed their orientation earlier rather

than later in the first study. They also expressed more negative attitudes towards gay men and women than those in the late disclosure group. Primacy effects were replicated in study two. In addition there was a significant interaction between timing of disclosure and sexual orientation where participants rated the gay partner who disclosed earlier more negatively than the straight partner who disclosed earlier. They were also shown to be more hostile towards the early disclosing gay partner than the late disclosing gay partner or early disclosing straight partner, as they chose more difficult letters for early disclosing gay partners.

While delaying disclosure of sexual orientation leads to more positive views of the gay individual, Buck and Plant (2011) state that it is somewhat problematic to encourage LGB individuals to hide their sexual orientation, and that the information about timing of disclosure should be used to find changes for the perceiver to make rather than the target. Disclosing too late could also be seen as lying by omission, ultimately resulting in a negative or even violent interaction.

It seemed that the most effective strategy would be to adopt a previously successful method of reducing prejudice of other stereotyped groups, including gay men and generalize it to sexual prejudice. Imagined intergroup contact is a method of reducing prejudice in which participants are asked to imagine that they are interacting with a member of an outgroup. Imagined intergroup contact improves intergroup attitudes not only by the way it helps participants to project positive traits onto the outgroup in question, but also due to the way that it reduces anxiety and stereotypes towards outgroups (Crisp & Turner, 2009).

This method of reducing prejudice had previously been successful in regards to gay men (Turner, Crisp & Lambert, 2007). The first two experiments were done imagining the elderly, in a similar situation as that of the gay men in the third and final part. In the third part of the

experiment the experimental group was asked to imagine that they were talking to a gay man who sat next to them on the train and that they talk about 30 minutes before he leaves.

Participants were asked to list some of the interesting/unexpected things you learned about him.

In contrast, the control group imagined they went on hiking trip in England, and arrived unexpectedly at a secluded bay. The participants were then asked to imagine and list different things they saw in the scene. Both groups of participants were given measures of intergroup anxiety, outgroup evaluation, and perceived outgroup variability. They also included a short scale of attitudes towards gay men, Their intervention was successful and participants in the experimental groups reported less intergroup anxiety, more positive outgroup evaluations, and greater perceived outgroup variability.

Crisp and colleagues continued this research and expanded the methods of using imagined intergroup contact to try to maximize the effect. Participants were asked to imagine both when and where they were interacting with the members of the outgroup (Husnu & Crisp, 2010). They also expanded their research by testing the effectiveness of asking the participants to close their eyes while they imagined the scenario (Husnu & Crisp, 2011). Both of these studies found that future intended contact with members of the outgroup was higher in the imagined contact groups than the control groups. A third study interested in the effects of attributional processes and perceptual focus showed that the effect of imagined intergroup contact can be improved by asking participants to imagine the scenario from the third person rather than the first person perspective (Crisp & Husnu, 2011).

Bisexual men, like other members of the LGBT community, experience sexual prejudice that can cause them stress, which can in turn lead to mental illness (Meyer, 2013). Bisexual individuals receive negativity from both heterosexual and homosexual individuals, and bisexual

men in particular are seen in a negative light (Eliason, 1997; Mohr & Rochlen, 1999; Yost & Thomas, 2012). According to the most up to date research, this sexual prejudice is primarily motivated by a discomfort with perceived unwanted sexual interest (Pirlott & Neuberg, 2014). While there have been some interventions that have attempted to mitigate sexual prejudice towards gay or lesbian individuals, there are none directed specifically at bisexual individuals of either gender (Bartos et al. 2014) We found that Lehmilller et al.'s 2010 study was not sufficiently effective, and that Buck and Plant's method, while effective, seemed potentially damaging when applied as a strategy for actual gay men outside of the lab setting (2010). Consequently, we thought that it was ideal to use the method of imagined intergroup contact, which had been previously effective with different outgroups, including gay men (Turner, Crisp & Lambert, 2007). This method has been explored with several modifications designed to achieve maximum effectiveness, which included asking participants to think specifically when and where they were interacting with the member of the outgroup, to close their eyes during the visualization, and to visualize the scenario in third rather than first person (Husnu & Crisp, 2010; Husnu & Crisp, 2011; Crisp & Husnu, 2011).

The current research combined these methods of imagined intergroup contact for maximum effectiveness. Participants closed their eyes, and imagined meeting a bisexual man for the first time. They thought specifically of when and where the situation might occur, and imagined the situation from a third person perspective rather than a first person one. They wrote down the things that they learned about the man in the imagined scenario. Finally, participants completed a questionnaire of intergroup anxiety, outgroup evaluation, perceived outgroup variability, attitudes towards bisexual men, and future intended contact.

Hypothesis

There has been comparatively little research on attitudes towards bisexuals, and even less directed towards reducing prejudice against this group. Imagined intergroup contact has been used to successfully reduce reported bias against outgroup members. Additionally imagined intergroup contact has been successful when adding directions to think of specifically when and where the contact would occur, for the participants to close their eyes, and for participants to imagine the scenario from a third person perspective. If we combine these methods then prejudice towards bisexual men will be significantly reduced. Participants in the imagined contact group will report less intergroup anxiety, more positive outgroup evaluation, higher perceived outgroup variability, more positive attitudes towards bisexual men, and higher future intended contact scores.

Method

Participants

Fifty-one undergraduate Georgia Southern students enrolled in psychology classes participated in order to obtain course credit or extra credit. The participants used the SONA system, an online participant recruitment system, to sign up for the study online. Forty-six percent of these students were African American, 46% were European American, 2% were African American and Latino(a), 2% were European American and Latino(a), and 4% were of another ethnicity. The majority of the participants (65%) were women and 35% were men. The mean age of participants was 18.8 ($SD = 4.3$). Fifty participants reported being heterosexual and one participant reported being bisexual. Only data from the heterosexual participants was analyzed to test the hypotheses.

Design

This study was an experimental between groups study in which the independent variable was imagined intergroup contact and the dependent variables were intergroup anxiety, outgroup evaluation, outgroup variability, and intended future contact. Participants were randomly assigned to either imagine intergroup contact with a bisexual man or they were randomly assigned to imagine a nature scene before reporting their attitudes.

Measures

Intergroup anxiety (Voci & Hewstone, 2003). In order to evaluate intergroup anxiety, participants were asked: 'If you were to meet a bisexual man in the future, how do you think you would feel?' Participants reported on a 7-point scale how: 'Awkward', 'Happy' (reverse scored), 'Self-Conscious', 'Competent' (reverse scored), and 'Relaxed' (reverse scored) they would feel from 1 (not at all) to 7 (very). Only the end points of the scale were categorically labeled. The Cronbach's alpha in the current sample was .74.

Outgroup evaluation (Voci & Hewstone, 2003). To measure outgroup evaluation, participants were asked to 'Please describe how you feel about bisexual men in general', responding to six items on 7-point semantic differential scales: cold-warm, positive negative (reverse scored), friendly-hostile (reverse scored), suspicious-trusting, respectful-contempt (reverse scored), admiration-disgust (reverse scored). The Cronbach's alpha in the current sample was .85.

Perceived outgroup variability (Turner et al. 2007). Perceived outgroup variability was evaluated using three items averaged to form a single index 'When you think about bisexual men, do you perceive them as similar to one another?', 'When you think about bisexual men, do you perceive them as different to one another?' (both items, 1 = not at all, 7 = very), and 'Among

bisexual men there are different types of people (1 = disagree, 7 = agree; the first item was reverse coded). The Cronbach's alpha in the current sample was .79.

Attitudes towards bisexual men (modified from Herek & Capitano, 1996). To assess attitudes towards bisexual men, participants were asked to rate how much they agree or disagree, on a 7-point scale (1 = disagree, 7 = agree), with the following statements: 'A man who has sex with both men and women is just plain wrong' (reverse scored), 'I think male bisexuals are disgusting' (reverse scored), and 'Male bisexuality is a natural expression of sexuality in men.' The Cronbach's alpha in this sample was .75.

Future intended contact (Husnu & Crisp, 2011;). In order to measure future intended contact, participants were asked "Thinking about the next time you find yourself in a situation where you could interact with a bisexual man": "How interested would you be in striking up a conversation?" (1 = not at all interested to 9 = highly interested); and "How much do you think you'd like to strike up a conversation?" (1 = not at all to 9 = very much). Cronbach's alpha in the current sample was .91. Participants were also asked "How many bisexual men do you think you might know in 5 years time?"

Procedure

Participants in the experimental group were run individually in the lab. They were told that they would be doing an activity to investigate how college students visualize different environments. The experimenter said:

First we will be doing a visualization exercise, followed by a short questionnaire. Please listen to the following instructions carefully, and follow them as best as you can. To help you visualize the scene, please relax and close your eyes. Keep your eyes closed as you go through the visualization process

The experimenter told those randomly assigned to the experimental condition:

I would like you to take a minute to imagine yourself meeting a bisexual man for the first time. I would like you to picture the scenario from a third-person visual perspective. With the third-person perspective you see the event from the visual perspective of an observer. That is, you see yourself in the scene from an external viewpoint. You have a conversation with this man, and during the conversation you find out some interesting and unexpected things about the man. While imagining this, think specifically of when (for example, next Thursday) and where (for example, the bus stop) this conversation might occur.

The experimenter told those randomly assigned to the control group:

We would like you to take a minute to imagine an outdoor scene. Try to imagine aspects of the scene about you (e.g., is it a beach, a forest, are there trees, hills, what's on the horizon).

The experimental group was then asked to:

Please take the next minute to list the things you learned about the man you imagined in the scenario.

The control group was then asked to:

Please take the next minute to list the things you imagined in the nature scene.

After this they completed the measures assessing their attitudes and intended behavior towards bisexual men.

The participants then filled out the demographic measure. After this, the participants answered questions in a funnel debriefing. Participants were asked:

What did you think my study was about? Did anything seem odd or suspicious? What did you think about the visualization task? What did you think was the purpose of the visualization task?

The experimenter paused between each question to give the participants time to respond and for the experimenter to write their answers. (Turner, Crisp & Lambert, 2007; Husnu & Crisp, 2010; Husnu & Crisp, 2011; Crisp & Husnu, 2011).

Results

Preliminary Analyses

Descriptive analyses were conducted on the dependent variables. Intergroup Anxiety scores ranged from 1.4 to 6.4 ($M = 3.25$, $SD = 1.15$). Outgroup Evaluation scores ranged from 2.5 to 7.0 ($M = 4.97$, $SD = 1.17$). Perceived Outgroup Variability scores ranged from 2.00 to 7.0 ($M = 4.85$, $SD = 1.36$). Modified Attitudes Towards Bisexuals scores ranged from 1.0 to 7.0 ($M = 4.27$, $SD = 1.59$). Future Intended Contact scores ranged from 1.00 to 9.00 ($M = 5.52$, $SD = 1.82$). Pearson's Correlations were also conducted to assess the associations between the scores on these measures. See Table 1 below.

Table 1

Bivariate Correlations Among Feelings About Bisexual Males

	1	2	3	4	5
1. Intergroup Anxiety	-	-.51**	-.17	-.37**	-.35*
2. Outgroup Evaluation		-	.42**	.57**	.62**
3. Perceived Outgroup Variability			-	.45**	.45**
4. Modified Attitudes Towards Bisexuals			.	-	.38**
5. Future Intended Contact					-

Notes. Correlations marked with a (*) were significant at $p < .05$ (2-tailed)
Correlations marked with a (**) were significant at $p < .01$ (2-tailed)

Hypothesis Testing

We hypothesized that there would be significant main effects of imagined intergroup contact, such that in the experimental group, intergroup anxiety scores would be significantly lower, that outgroup evaluation scores would be significantly more positive, that perceived outgroup variability would be significantly higher, that modified attitudes towards bisexuality scores would be significantly more positive, and that future intended contact scores would be significantly higher than in the control group. We also predicted that the average number of bisexual men the imagined contact group thought they would know in five years would be higher than the average for the control group. Following Turner, Crisp, and Lambert (2007) t-tests were conducted. Contrary to hypotheses, results showed there was not a significant difference between the experimental group and the control group on any of these variables.

The results showed similar levels of intergroup anxiety in the imagined contact group ($M = 3.08$; $SD = 1.09$) as in the control group ($M = 3.49$; $SD = 1.22$), $t(48) = 1.27$, $p = .21$; similar levels of outgroup evaluation were also observed in the imagined contact group ($M = 5.0$; $SD = 1.16$) as in the control group ($M = 4.93$; $SD = 1.22$), $t(48) = -.21$, $p = .83$; similar levels of perceived outgroup variability were also seen in the imagined contact group ($M = 4.57$, $SD = 1.41$) as in the control group ($M = 5.22$, $SD = 1.2$), $t(48) = 1.7$, $p = .1$; the imagined contact group ($M = 4.09$, $SD = 1.75$) showed similar attitudes towards bisexual men to the control group ($M = 4.52$, $SD = 1.33$), $t(48) = .95$, $p = .35$; and future intended contact scores were similar in the experimental group ($M = 5.71$, $SD = 1.77$) as in the control group ($M = 5.26$, $SD = 1.91$), $t(48) = -.85$, $p = .4$. The results also showed that the imagined contact group ($M = 5.69$, $SD = 5.23$) did not report a higher number on average of bisexual men that they thought they would know in the future than the control group ($M = 3.4$, $SD = 2.82$), $t(48) = -1.79$, $p = .08$.

Additional Analyses

Given the unexpected findings that there were no significant effects of the imagined intergroup contact task on attitudes and perceptions towards bisexual men, we decided to test whether participant gender might moderate the effect of the imagined intergroup contact prime. Therefore, the data were further analyzed using a 2(task: imagined intergroup contact versus control) x 2(gender: male vs. female) between groups MANOVA. The results showed a nonsignificant effect of task, Wilk's Lambda = .83, $F(5, 42) = 1.69$, $p = .16$, $\eta^2_p = .17$. There was a significant main effect of gender, Wilk's Lambda = .73, $F(5, 42) = 3.12$, $p = .02$, $\eta^2_p = .27$. This main effect of gender was qualified by a significant interaction between gender and task, Wilk's Lambda = .77, $F(5, 42) = 2.46$, $p = .05$, $\eta^2_p = .23$. An examination of the univariate analyses showed a significant interaction between gender and task type on outgroup evaluations, $F(1, 46) = 4.61$, $p = .04$ and on the perceived outgroup variability scores, $F(1, 46) = 8.79$, $p = .005$. There were no significant interaction between gender and task type on intergroup anxiety, attitudes towards bisexuals, or future intended contact, all p 's > .05. To understand the significant interactions, we conducted follow up simple effects tests.

Outgroup variability. For outgroup variability, results showed that the women in the experimental group who imagined intergroup contact with a bisexual man ($M = 4.35$, $SEM = .37$, $n = 16$) saw less variability in bisexual men in general, than did the women in the control group ($M = 5.92$, $SEM = .30$, $n = 12$), $t(26) = 3.09$, $p < .01$. Men in the experimental group saw similar levels of variability ($M = 4.85$; $SEM = .36$, $n = 13$) as men in the control group ($M = 4.30$; $SEM = .67$, $n = 9$), $t(20) = -1.15$, $p = .26$.

Outgroup evaluation. For outgroup evaluation, women in the control group ($M = 5.65$, $SEM = .28$, $n = 12$) reported more positive evaluations than men in the control group ($M = 3.96$,

SEM = .26, $n = 9$), $t(19) = 4.26$, $p < .01$. There was not a significant difference between the outgroup evaluations of women in the experimental group ($M = 5.17$; $SEM = .29$, $n = 16$) and men in the experimental group ($M = 4.79$; $SEM = .32$, $n = 13$), $t(27) = .86$, $p = .40$.

Discussion

The aim of this research was to determine whether participants who were asked to imagine meeting a bisexual man for the first time would show reduced prejudice towards bisexual men in comparison to the control group. We hypothesized that in the imagined contact group intergroup anxiety would be lowered, outgroup evaluation would be more positive, perceived outgroup variability would be higher, attitudes towards bisexual men would be more positive, and future intended contact scores would be higher. However, the hypothesis was not supported by the results. The results showed no significant difference between intergroup anxiety, outgroup evaluation, perceived outgroup variability, attitudes towards bisexual men, or future intended contact between the imagined contact group and the control group. This is in contradiction to results in Turner, Crisp and Lambert who reported less intergroup anxiety, more positive outgroup evaluations, and greater perceived outgroup variability in the experimental group (2007). This was also in contradiction with Husnu & Crisp (2010), Husnu & Crisp (2011) and Crisp & Husnu (2011) who reported higher future intended contact in the experimental group than the control group.

We also tested whether participant gender would moderate the effect of the imagined contact visualization. Results showed that women in the experimental group saw significantly less outgroup variability than the women in the experimental group. Results also showed that women in the control group had outgroup evaluations that were significantly more positive than

that of the men in the control group. However, in the experimental group, there was not a significant difference between the men and the women in outgroup evaluation scores, suggesting that the men rose up to women due to the experimental condition. Yost and Thomas found that women were more accepting of bisexual individuals than men were (2012). Eliason also found that gender was a predictor of negative attitudes towards bisexuals, with men being more negative than women (1997). While it is not unusual for women to be less prejudiced, as they were in the control condition, it is unusual for the men to be on par with the women as they were in the experimental group, and the result warrants further investigation in future studies.

It is possible that intergroup anxiety is not significantly altered due to the function of sexual prejudice. Pirlott and Neuberg (2014) posited that because sexual interest is higher and more salient among college students than it is in other groups in the population, unwanted sexual interest is likely to be a stronger predictor of sexual prejudice. Though participants might not have seen bisexual men in a less negative light, they could still feel uncomfortable because of possible unwanted sexual interest. Similarly, future intended contact could continue to be uncomfortable for participants if they perceive bisexual men as having unwanted sexual interest in them. In regards to attitudes towards bisexuals, the questions are measuring a similar construct to outgroup evaluation, however the statements are much more strongly worded, which could cause a more emotionally charged reaction to the statements.

Limitations

Numbers of participants in both groups were fairly small, and there were less participants in the control group than in the experimental group, which could cause an issue with power. Additionally, we relied upon convenience sampling. This meant that our participants were almost exclusively in their late teens and early twenties, and a majority of the participants were female.

The study was also conducted in the southern region of the United States, which is known for being both more conservative and more religious. It is possible that this impacted the results.

Implications and Future Directions

The results of this study were in opposition to that of previous studies on reducing prejudice via imagined intergroup contact. This could either be indicative of a flaw in my study, a difference in culture of participants in my study and that of Crisp and colleagues, or a unique aspect of the outgroup of bisexual men. Imagined intergroup contact has faced some criticism as an intervention. Bigler and Hughes voiced their skepticism for the method in the *Psychological American* (2002). They said that long term prejudice reduction is difficult to achieve and maintain, based on previous research on social stereotyping and prejudice reduction. They also felt that there was too much variability of the effect on participants, as only a subgroup of the experimental group was affected. Bigler and Hughes also noted that there were no measures of behavior in Crisp's studies, and that all of the measures were self-reported measures of attitude. In addition, they were concerned that imagined intergroup contact produced significant effects only on certain subsets of measures of prejudice and that the literature has not shown simulated social contact to have any lasting effect. They believe that the significant effects are "practically unimportant, and that it is possible that the effects are just a result of demand characteristics.

In response to criticism about self-report measures, Crisp and Turner pointed out that their most recent study at the time reduced prejudice even at implicit levels, and it would be difficult for participants to do this in response to demand characteristics (2010). In regards to the questions raised about empirical support, they responded that they were looking at a very narrow range of studies that omitted studies with successful interventions, and that the studies they deemed as unsuccessful do have successful aspects to them. Turner and Crisp noted that their

study is only one study, and that they will seek to address criticisms to their particular studies, but that the effects of all of the studies overall are what is most important. Turner and Crisp agree that imagined contact is not likely to reduce prejudice long term with only one exposure, but that with multiple exposures they believe there is a lot of potential for success.

In the future, it would be ideal to work with more diverse populations and in different regions. It would also be interesting to add a measure of religiosity to see if results were modified by this factor at all, as Herek reported that high religiosity was correlated with negative attitudes towards bisexuals (2002). Additionally, Buck and Plant found that participants who ranked family/friends as their most important value scored high on religious fundamentalism, and that participants who chose to affirm the value of family/friends were also shown to be significantly more prejudiced than those who affirmed a different value (Lehmiller et al. 2010).

Conclusions

Though our intergroup contact group did not significantly vary from our control group on intergroup anxiety, outgroup evaluation, perceived outgroup contact, attitudes towards bisexual men, and future intended contact, we did find significance when we moderated for gender. Women in the experimental group saw significantly less outgroup variability than the women in the control group. Women also had outgroup evaluations that were significantly more positive than that of the men in the control group, while the experimental condition eliminated this difference. This suggests that it is important to continue to investigate the role that gender has on reducing prejudice, particularly against sexual minorities. This study was the first to use imagined intergroup contact to see if it would mitigate prejudice against bisexual men, and will hopefully open the door for more successful interventions.

References

- Bartos, S.E., Berger, I., & Hegarty, P. (2014). Interventions to reduce sexual prejudice: A study space analysis and meta-analytic review. *Journal of Sex Research, 51*, 363-382.
- Bigler, R.S. & Hughes, J.M. (2010). Reasons for skepticism about the efficacy of simulated social contact interventions. *American Psychologist, 65*, 132-133.
- Buck, D.M. & Plant, E.A. (2011). Interorientation interactions and impressions: Does the timing of disclosure of sexual orientation matter? *Journal of Experimental Social Psychology, 47*, 333-342.
- Crisp, R.J. & Husnu, S. (2011). Attributional processes underlying imagined contact effects. *Group Processes and Intergroup Relations, 14*, 275-287.
- Crisp, R. J. & Turner, R. N. (2010) Have Confidence in Contact. *American Psychologist, 65*, 133-135.
- Crisp, R.J. & Turner, R.N. (2009). Can imagined interactions produce positive perceptions? Reducing prejudice through simulated social contact. *American Psychologist, 64*, 231-240.
- Eliason, M.J. (1997). The prevalence and nature of biphobia in heterosexual undergraduate Students. *Archives of Sexual Behavior, 26*, 317-326.
- Herek, G.M. (2002). Heterosexuals' attitudes towards bisexual men and women in the United States. *The Journal of Sex Research, 39*, 264-274.

- Herek, G. M., & Capitano, J. P. (1996). 'Some of my best friends': Intergroup contact, concealable stigma, and heterosexuals' attitudes toward gay men and lesbians. *Personality and Social Psychology Bulletin*, *22*, 412-424.
- Husnu, S. & Crisp, R.J. (2010). Elaboration enhances the imagined contact effect. *Journal of Experimental Social Psychology*, *46*, 943-950.
- Husnu, S. & Crisp, R.J. (2011). Enhancing the imagined contact effect. *The Journal of Social Psychology*, *151*, 113-116.
- Lehmiller, J. J., Law, A. T., & Tormala, T. T. (2010). The effect of self-affirmation on sexual prejudice. *Journal of Experimental Social Psychology*, *46*, 27-285.
- Meyer, I.H. (2013). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychology of Sexual Orientation and Gender Diversity*, *1*, 3-26.
- Mohr, J.J. & Rochlen, A.B. (1999). Measuring attitudes regarding bisexuality in lesbian, gay male, and heterosexual populations. *Journal of Counseling Psychology*, *46*, 353-369.
- Pirlott, A.G. & Neuberg, S.L. (2014) Sexual prejudice: Avoiding unwanted sexual interest? *Social Psychological and Personality Science*, *5*, 92-101.
- Rust, P.C. (2002). Bisexuality: The state of the union. *Annual Review of Sexual Research*, *13*, 180-240.
- Turner, R.N., Crisp, R.J., & Lambert, E. (2007). Imagining intergroup contact can improve intergroup attitudes. *Group Processes & Intergroup Relations*, *10*, 427-441.

Voci, A., & Hewstone, M. (2003). Intergroup contact and prejudice toward immigrants in Italy:

The mediational role of anxiety and the moderational role of group salience. *Group Processes & Intergroup Relations*, 6, 37–54.

Worthen, M.G.F. (2013). An Argument for Separate Analyses of Attitudes Toward Lesbian,

Gay, Bisexual Men, Bisexual Women, MtF and FtM Transgender Individuals. *Sex Roles*, 68, 703-723.

Yost, M.R. and Thomas, G.D. (2012). Gender and binegativity: Men's and women's attitudes

toward male and female bisexuals. *Archives of Sexual Behavior*, 41, 691-702.