

## Reactions to Homosexual, Transgender, and Heterosexual Public Displays of Affection

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### Abstract

At least two factors may influence reactions to public displays of affection (PDA): personal level of comfort with PDA and attitudes toward sexual minorities. In three studies, we measured participants' reactions to videotaped heterosexual, homosexual, and transgender PDA. A measure was created to evaluate comfort with PDA. Across all studies, we found that comfort with PDA predicted participant reactions toward PDA. We also found that participants were generally comfortable with viewing all PDA scenarios, but participants were most comfortable viewing heterosexual PDA and least comfortable viewing transgender PDA. Finally, we found that multiple measures of homophobic attitudes predicted reactions to PDA featuring sexual minorities.

### Introduction

Support of the legal rights of homosexual couples has been on the rise in North American countries, particularly in Canada and the United States (Doan, Loehr, & Miller, 2015; Morrison, Trinder, & Morrison, 2018). In Canada, gay and lesbian couples cannot be denied the right to adopt a child due to their sexual orientation (Morrison et al., 2018). Partner rights and benefits, such as same-sex marriage, have become legal in the United States, and the majority of U.S. citizens are in favor of gay marriage (60% as of 2015; Doan et al., 2015).

Despite widespread support for the legal rights of homosexual couples, it has been found that many heterosexual individuals do not approve of homosexuals' "informal rights" (Doan et al., 2015). Engaging in a public display of affection (PDA) is an act that can be categorized under one's informal rights, meaning acceptance of PDA is an aspect of society that is not controlled through legal means, but rather through social interactions (although it is worth noting that in some countries legal regulations determine the norms surrounding PDA). Homosexual couples are at a higher risk of experiencing prejudice, negative public perception, or fear for one's personal safety when engaging in PDA compared to heterosexual couples (Doan et al., 2015; Vaquera & Kao, 2005). The present study is an examination of how attitudes toward PDA

and attitudes toward individuals of differing sexual orientations influence reactions to viewing PDA.

PDA, using physical affection, such as kissing or hugging, are methods employed in a public space to confirm and maintain relationships (e.g., Doan et al., 2015; Kent & El-Alayli, 2011). Physical affection has been defined as, “any touch intended to arouse feelings of love in the giver and/or the recipient” (Kent & El-Alavli, 2011, p. 150). Seven types of physical affection have been identified, including: “backrubs and massages, caressing and stroking, cuddling and holding, holding hands, hugging, kissing on the lips, and kissing on the face (not lips)” (Kent & El-Alavli, 2011, p. 150). Public displays of affection are considered to be important traits of a satisfying relationship, which is why it is important to consider how homosexual and transgender PDA is perceived by and affected by others (Mohr, Selterman, & Fassinger, 2013).

Public spaces are defined by the rules people follow in the space. If the normal routine of the space is to display affection, people will more readily accept PDA from any gender in that area (Hubbard, 2001). Although societies are not monolithic, a general culture can drastically change what is considered publicly acceptable. People feel more comfortable expressing PDA in countries where friendships and displays of thanks are expressed through PDA, such as in the United Kingdom, while other countries have more conservative attitudes (Anderson, Adams, & Rivers, 2010; Soysal, 2010).

Kisses are common in the public sphere within the United States, which is regarded to be in the middle range of acceptability of public displays of affection (Fox, 1999). Within the United States, attitudes toward the acceptability of PDA vary greatly. Many individuals in the United States condone heterosexual couples holding hands or kissing but discourage making out or sexually touching. In contrast, there are some people who believe all public displays of affection are inappropriate. Anecdotes often emerge demonstrating how small public displays of affection can garner negative reactions. For example, in 2007, a female middle school student in Illinois was given two days of detention for hugging a female friend (Gray, 2007).

Heterosexual couples often engage in small public acts of love in everyday life, but it is less common to see homosexual couples showcase affection through PDA (Hubbard, 2001; Mohr et al., 2013). Homosexual couples have reported that they wish to engage in displays of affection more often, but the couples feel judged when displaying their affection (Lemar & Kite, 1998). In gay couples specifically, relationships that include showing affection are reported to be significantly more satisfying and likely to last compared to gay couples in relationships who do not showcase their affection (Lemar & Kite, 1998).

A prevalent misbelief in the United States is that negative views of homosexuality are tied to age, with the younger generations holding more accepting views than older groups. Olson and DeSouza (2017) found that religiosity and identifying as a political conservative remain the strongest influence on feelings toward sexual minorities, as opposed to age. Many religions condemn same-sex pairings, which influences the attitudes of a religion’s followers (Hubbard, 2001). In highly religious countries, attitudes toward same-sex pairings are negative, and laws

are often enacted that force homosexuals to hide their relationships from the authorities or face persecution and legal consequences (Same-Sex Marriage Laws, 2013).

For example, Islam is the federal religion of Malaysia, and homosexuality is outlawed there as a result of the laws of the religion. Homosexuality is considered to be both sinful and punishable by 20 years of imprisonment and caning (Ng, Yee, Subramaniam, Loh & Moreira, 2015). In March 2019, the country of Brunei enacted a penal code based on Shariah law, which includes death by stoning for sex between men and 40 lashes for lesbian sex (Magra, 2019). This act has been met with heavy resistance from other countries and human rights groups.

Previous studies have attempted to determine how perceptions of homosexual PDA are influenced by the viewer's attitudes toward homosexuality (Kiebel, McFadden, & Herbstrith, 2017; O'Handley, Blair & Hoskin, 2017). Kiebel et al. (2017) asked 45 female and 39 male college students in the United States to view images of gay men kissing, lesbians kissing, or heterosexual couples kissing. Test participants in this study reported little to no prejudice towards homosexuality. However, they found that individuals experienced negative valence and disgust when viewing images of gay men kissing. Images of two females kissing were rated less severely but still elicited feelings of disgust. These subjects found the images of heterosexual couples kissing to be pleasant. O'Handley et al., (2017) examined physiological reactions, implicit (AMP) ratings, and the explicit valence and disgustingness ratings of 465 heterosexual men ages 18 to 45 to images of same-sex or mixed-sex couples kissing or engaged in PDA. They found higher measures of distress (e.g., higher implicit and explicit ratings) when participants viewed men kissing than when they viewed imagery regarded to be universally disgusting (O'Handley et al., 2017). However, these studies found that individuals did not report harboring homosexual attitudes. These studies did not elucidate if these reactions indicated implicit homophobia.

At least two possible factors may guide how people react to PDA of various sexual orientations: (a) people's general attitudes and feelings toward PDA; and (b) people's attitudes toward homosexuality and transsexuality (when the couple engaged in PDA is either gay, lesbian, or transgender).

Previous studies have consistently found that men are more explicitly sexually prejudiced than women (Kiebel et al., 2017; Monto & Supinski, 2014). Viewing gay erotica is associated with negative affect, anger-hostility, and feelings of fear in men who have self-reported being sexually prejudiced (Bernat, Calhoun, Adams, & Zeichner, 2001; Parrott, Zeichner, Hoover 2006). Multiple studies have found that even when participants are considered to be non-sexually prejudiced, baseline anger-hostility increases after viewing homosexual erotic videos (Bernat et al., 2001; Hudepohl, Parrott, & Zeichner, 2010). In a study by Bishop (2015), men who viewed romantic and homoerotic images experienced increased negative emotional states. This does not mean that heterosexual women do not harbor prejudice toward homosexuality; women have also been found to experience heightened anger toward viewing same-sex relationships in videos if they self-report being high in gender traditionalism (Parrott & Gallagher, 2008). Men tend to be more discriminatory toward gay men than lesbians, while women are more discriminatory toward lesbians (Kiebel et al., 2017).

Increases in support for the rights of the homosexual community have resulted in homosexual couples expressing PDA (including on television and other forms of media) more openly than they might have in the past (O’Handley et al., 2017). However, sexuality and gender have significant effects on how public displays of affection are received by others (Anderson et al., 2010; Kent & El-Alayli, 2011). Individuals who harbor implicit and explicit feelings of homophobia now encounter more acts of PDA from homosexual couples, which might explain an increasing trend of violence toward homosexual people (O’Handley et al., 2017). As such, it seems logical that a potential influence on one’s attitudes toward PDA is one’s attitude toward gays and lesbians more generally (when the couple engaged in PDA is either gay or lesbian).

Research surrounding attitudes toward sexual minorities has focused more on issues surrounding gay and lesbian individuals than on people who identify as transgender. With higher visibility in the media and public debates on the rights of transgender individuals, conversations have recently been brought to the mainstream related to the inequality and risk of violence transgender people face in society (Mao, Hauptert & Smith, 2018). Generally speaking, transgender is an umbrella term to describe individuals who have a disconnect between their biological sex and their gender identity (Meier & Labuski, 2013).

Transgender individuals face stronger negativity and prejudiced attitudes than other sexual minorities (i.e., gay, lesbian, and bisexual people; Norton & Herek, 2018). Negative attitudes toward transgender people have been found to be a function of religious fundamentalism, political conservatism, and authoritarianism in the United States, which is consistent with attitudes toward gay and lesbian people (Norton & Herek, 2018). To date, no studies have appeared to explore attitudes toward PDA involving transgender individuals.

## **Study Goals and Hypotheses**

This study explores attitudes toward PDA in heterosexual and sexual minority couples. Despite evidence suggesting that there are individual differences in how open to seeing PDA people are, no individual difference measures exist for assessing attitudes toward PDA. As such, one of the first goals of this research was to develop a measure of attitudes towards PDA. We hypothesized that (a) participants who were more open to PDA, would be more tolerant of this behavior in general (across all PDA types).

We were also interested if people’s reactions to PDA would vary based on the apparent sexual orientation of the targets. As such, participants reacted to heterosexual, gay male, lesbian, and (in study three) transgendered PDA. Beyond this, we were also interested if the participants’ sex, the attitudes toward PDA measure, and measures related to homophobia would interact with the witnessed PDA. In this regard, we had a number of specific hypotheses. We hypothesized that (b) there would be differences in comfort with the various forms of PDA (where heterosexual PDA would be seen as the most acceptable followed by the other forms of PDA). We also hypothesized that (c) the participants’ sex would interact with the types of PDA observed (where males would be more accepting of lesbian PDA than gay PDA, whereas females would be more accepting of gay PDA than lesbian PDA). Finally, we hypothesized that (d) people higher in various forms of homophobia would be less accepting of PDA in the relevant categories (as detailed in the individual studies).

## Study One

The purpose of study one was to create an individual difference measure dealing with how comfortable a participant was with PDA. We also explored whether the participant's sex would impact participant's comfort in viewing PDA in heterosexual and homosexual couples. Finally, we sought to explore whether homophobia would interact with people's reactions to the observed PDA.

### *Methods*

*Participants.* Fifty-nine students from a large private university in the Northeastern region of the United States were recruited to participate in this experiment (28 men, 31 women,  $M_{age} = 19.6$  years,  $SD = 1.6$ ). The sample was largely heterosexual ( $N = 56$ ).

*Materials: Stimuli videos.* We created three ten-second videos showing public displays of affection (specifically, a couple kissing passionately). The first video featured a heterosexual couple, the second video featured a gay couple, and the third video featured a lesbian couple. Each couple consisted of Caucasian individuals. Each video showed the couple from the side, allowing both faces to be seen. The couples were balanced as much as possible for attractiveness where each member of the couple was rated as moderately attractive in a pretest. The couples were asked to kiss naturally for the length of the video.<sup>1</sup>

*Materials: Comfort with PDA measure.* We also created a measure of comfortability with public displays of affection. This measure consisted of four items (e.g., (a) How comfortable are you with hand holding in public for same sex couples? (b) How comfortable are you with hand holding in public for opposite sex couples? (c) How comfortable are you with kissing in public for same sex couples? (d) How comfortable are you with kissing in public for opposite sex couples?). These items were rated on a five-point Likert-style scale (very comfortable, comfortable, neutral, uncomfortable, very uncomfortable).

*Procedure.* After completing a consent form upon arriving in the laboratory, participants initially self-reported basic demographic information (age, gender, sexual orientation). Then, participants watched the three stimuli videos and responded to two questions assessing if they had seen a couple of that type kissing in that type of location (a campus public space) and if they believed the subjects in the videos had a right to kiss in that area (a campus public space). The order of presentation of the videos was counterbalanced (using a Latin-Squares design). Finally, participants were asked to self-report their levels of homophobia using the Wright homophobia scale (Wright, Adams, & Bernat, 1999). As the participants were viewing the videos, the experimenter recorded outward displays of discomfort as a supplemental measure of discomfort using a rubric noting each occurrence observed (e.g., shifting in seat, looking away from the screen, obvious changes in expression, and trying to skip past the videos). The researcher could not see what was displayed on the screen, he or she simply heard an audio marker depicting the

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<sup>1</sup> One might ask why the videos only featured Caucasian actors. This was done to limit potential experimental noise driven by people's racial attitudes as well as differential attractiveness ratings based on target race (e.g., Lewis, 2011).

start of each video and recorded the displays of discomfort (which were then linked to condition after the experimental session).

### Results

Before analyzing the results, we first investigated the reliability and factor structure of the comfortability with PDA scale. The scale had a strong reliability for a 4-item scale ( $\alpha = .768$ ), along with a one factor solution as suggested by an EFA using the Skree test and Eigenvalue tests (Eigenvalue = 2.38). As such, we combined the four items into one measure.

*Self-reported comfort.* Prior to conducting detailed analyses of the individual videos, we tested for order effects of the order of presentation of the videos. Order of presentation did not interact with any of the predictors ( $p$ 's > .15) and, as such, we collapsed across orders of presentation for all subsequent analyses. Given our ability to look at all participants' reactions to each video, we will present our results focused on each video in this section.

*Opposite-sex pairing.* In the opposite sex pairing, we entered attitudes toward PDA, homophobia, and gender into a regression equation. Attitudes toward PDA significantly predicted participants' comfort level with the scene ( $b = .135$ ;  $SEb = .049$ ;  $p < .01$ ), where participants who had more supportive attitudes toward PDA were more comfortable with the scene. Neither homophobia nor gender predicted any relationships.

*Gay pairing.* In the gay pairing, we entered attitudes toward PDA, homophobia, and gender into a regression equation. Attitudes toward PDA significantly predicted participants' comfort level with the scene ( $b = .183$ ;  $SEb = .041$ ;  $p < .001$ ), where participants who had more supportive attitudes toward PDA were more comfortable with the scene. Additionally, homophobia significantly predicted participants' level of comfort with the scene ( $b = .054$ ;  $SEb = .014$ ;  $p < .01$ ), where participants who had higher levels of homophobia were less comfortable with the scene. Participant gender did not predict any relationships.

*Lesbian pairing.* In the lesbian pairing, we entered attitudes toward PDA, homophobia, and gender into a regression equation. Attitudes toward PDA significantly predicted participants' comfort level with the scene ( $b = .152$ ,  $SEb = .049$ ,  $p < .01$ ), where participants who had more supportive attitudes toward PDA were more comfortable with the scene. Additionally, homophobia significantly predicted participants' level of comfort with the scene, ( $b = .044$ ,  $SEb = .016$ ,  $p < .01$ ), where participants who had higher levels of homophobia were less comfortable with the scene. Participant gender did not predict any relationships.

*Researcher observations.* There was a significant difference in researcher-based observations of discomfort between the different scenes ( $F(2, 110) = 7.62$ ,  $p < .001$ , partial  $\eta^2 = .217$ ). Participants displayed the most signs of discomfort in response to the gay scene ( $M = 2.90$ ,  $SD = .96$ ); the lesbian scene had the second most discomfort ( $M = 2.66$ ,  $SD = .99$ ); whereas the straight scene had the lowest level of discomfort ( $M = 2.47$ ,  $SD = .92$ ).

Gender of the participant also interacted with the type of scene, such that men experienced the greatest level of discomfort in response to the gay scene, whereas women had

similar levels of discomfort in response to both the lesbian and gay scenes, ( $F(2, 110) = 5.64, p < .01$ , partial  $\eta^2 = .172$ ).

### *Discussion*

Overall comfort levels when viewing PDA were neutral to high. Women reacted less strongly than men to viewing PDA, which was clear through observed comfort levels while watching the videos. Men displayed the least amount of comfort when viewing gay PDA, whereas women reacted with less comfort toward gay and lesbian PDA. Homophobia predicted participants' level of comfort with the lesbian and gay PDA scenarios, with the lowest comfort levels in more homophobic individuals. Finally, comfortability with public displays of affection had an effect on participant response to the stimuli in all cases, confirming our hypothesis that people who are averse to public displays will react more negatively to PDA. We believe these results demonstrate that people's attitudes toward PDA are influenced by the participants' gender, the gender and sexuality of the people engaged in PDA, and the participants' general attitudes toward PDA.

### **Study Two**

Several confounding variables could have affected the results of the first study. Although we tested for order effects (and found none), it is possible that participants ascertained the purpose of the study after viewing the first stimulus video. It is also possible that the presence of the researcher evaluating participant responses changed participants' responses (Henry et al., 2015). As such, we conducted an online follow-up study where we only administered one video per participant to control for these potential influences. We also collected additional individual difference measures to allow for a test of discriminant validity of our attitudes towards PDA measure.

### *Methods*

*Participants.* One hundred fifty-four students participated in this experiment (92 men, 62 women,  $M_{age} = 19.6$  years,  $SD = 2.4$ ). The sample was largely heterosexual ( $N = 126$ ), with lower numbers of bisexuals ( $n = 10$ ), homosexuals ( $n = 6$ ), unsure/questioning ( $n = 10$ ), and other ( $n = 2$ ).

*Procedure.* After documenting consent, participants watched one of the PDA videos from study one (the specific video was randomly assigned to each participant) and rated their level of comfort with the video. Next, participants completed a self-monitoring scale (Snyder, 1974), the comfort with PDA measure from study one, demographics, a homophobia measure (Altemeyer, 2002), a religiosity measure (Worthington et al, 2012), and the Wright homophobia scale (Wright et al., 1999).

### *Results*

*Preliminary analysis.* Before analyzing the results, we again investigated the reliability and factor structure of the comfortability with PDA scale. The scale had a strong reliability

( $\alpha = .833$ ), along with a one factor solution as suggested by an EFA using the Skree and Eigenvalue tests (Eigenvalue = 2.67). As in study one, these results highly suggest a single factor solution and, as such, we combined the items into a single score.

*Primary analysis.* Given that each participant only saw one video (unlike study one), we will present our results for this study collapsing across all videos. Our first question of interest was whether attitudes toward PDA would influence participants' responses to the video. As in study one, attitudes toward PDA significantly predicted participants' comfort level with the scene ( $b = .147$ ,  $SEb = .025$ ,  $p < .001$ ), where participants who had more supportive attitudes toward PDA were more comfortable with the scene.

Next, we investigated whether there was a difference in how the three videos were perceived. We found that heterosexual displays were seen as most comfortable ( $M = 3.65$ ,  $SD = 1.08$ ); lesbian ( $M = 2.75$ ,  $SD = .94$ ) and gay ( $M = 2.92$ ,  $SD = 1.26$ ) had lower levels of comfort ( $F(2,151) = 9.94$ ,  $p < .001$ , partial  $\eta^2 = .116$ ).

Next, we analyzed whether the measures of homophobia interacted with the gender of the persons engaged in PDA. We found converging results between both measures of homophobia, such that there were significant differences between participants who were high in homophobia and low in homophobia in how comfortable they felt with the gay male pairing, such that homophobic participants were less comfortable with that display of affection (Altemeyer measure:  $F(2, 139) = 4.73$ ,  $p < .01$ , partial  $\eta^2 = .063$ ; Wright measure:  $F(2, 139) = 4.18$ ,  $p < .05$ , partial  $\eta^2 = .057$ ). Neither measure significantly predicted attitudes towards the lesbian pairing ( $p$ 's  $> .15$ ).

We then analyzed whether religiosity influenced participants' responses. We found a trend toward significance where highly religious participants were less comfortable with gay male PDA ( $F(2, 139) = 2.27$ ,  $p = .11$ , partial  $\eta^2 = .031$ ), although we urge caution in over interpreting this data as it has not reached significance levels. Religiosity did not impact attitudes towards the lesbian pairing ( $p > .15$ ).

Finally, we analyzed whether self-monitoring impacted participants' attitudes toward PDA. No significant relationships were detected ( $p$ 's  $> .15$ ).

### *Discussion*

In this study, we replicated the basic pattern seen in study one, where participants who self-report higher levels of comfort with PDA demonstrate a greater level of comfort with PDA. We also demonstrate discriminant validity for our PDA measure as the results of the self-monitoring measure did not show a similar pattern of results. Finally, we replicated the basic pattern of results from study one, where comfort levels overall were neutral to high, but participants who were higher in homophobia were less supportive of gay male PDA.

### Study Three

Studies one and two demonstrated that people's attitudes towards PDA generally predict their attitudes towards observed PDA. We also demonstrated in both observed interpersonal reactions and self-reported measures that people's comfort with PDA also varies based on the sexual orientation engaged in PDA, and that these responses are moderated by the sexual attitudes of the observer. However, in studies one and two we only looked at two sexual minorities (gays and lesbians). As such, in study three, we wanted to replicate our results from studies one and two while exploring another sexual minority group: transgender individuals.

#### *Method*

*Participants.* One hundred sixty-seven students participated in this experiment (85 males, 77 females,  $M_{age} = 19.15$  years,  $SD = 1.49$ ). The sample was comprised of 86 men, 78 women, 2 transgender, and 1 non-disclosed individual. Five participants were excluded for failing to complete a majority of the measures.

*Procedure.* Like study two, this study was conducted online. After completing consent, participants were asked to report their basic demographic information (e.g., race, gender, sexual orientation, religiosity). Next, participants watched the three videos and responded to the questions asked in studies one and two. As in study one, the order of presentation of the videos was counterbalanced using a Latin-Squares design. After rating the third video, participants were provided with information that one of the members of the couple featured in the last video identified as transgender and this individual was pointed out using their location (left or right) in the video. Participants were then asked to complete a fourth set of ratings. Finally, participants completed the Worthen's (2012) Attitudes Towards LGBT Peoples Scale (which contains multiple subscales asking about attitudes towards specific LGBT attitudes) and an adapted version of the Wright, Adams, and Bernat (1999) Homophobia Scale.

#### *Results*

Order of presentation did not interact with any of the predictors ( $p$ 's  $> .15$ ) and, as such, we collapsed across orders of presentation for all subsequent analyses.

*Preliminary analysis.* Before analyzing the results, we again investigated the reliability and factor structure of the comfortability with PDA scale. The scale had a strong reliability ( $\alpha = .901$ ), along with a one factor solution as suggested by an EFA using the Skree and Eigenvalue tests (Eigenvalue = 3.13). As in study one, these results highly suggest a single factor solution and, as such, we combined the items into a single score.

*Primary analyses: Biological sex and scenario type.* There was a significant interaction between biological sex and type of PDA ( $F(3,158) = 3.57, p = .01, \eta^2_{\text{partial}} = 0.07$ ). This took the form that the difference between men and women (where women expressed more comfort than men) was greatest for gay PDA, whereas the difference between men and women was smallest for the lesbian PDA as shown in Table 1.

Table 1

Comfortability with PDA across All Studies

	Study One		Study Two		Study Three	
	Male	Female	Male	Female	Male	Female
Heterosexual	15.84 (1.81)	16.97 (2.37)	15.79 (3.38)	15.73 (2.92)	15.86 (3.35)	16.95 (2.66)
Gay	14.88 (1.74)	16.41 (2.52)	14.78 (3.19)	15.81 (3.62)	14.02 (4.12)	15.56 (3.59)
Lesbian	15.76 (2.40)	15.48 (2.31)	15.53 (3.11)	15.03 (4.46)	15.16 (3.52)	15.49 (3.74)
Transgender					13.75 (3.84)	14.96 (4.02)

This suggests that men showed a particular discomfort when viewing gay PDA, whereas women showed a particular discomfort to lesbian PDA. Additionally, there were two main effects. Biological sex was also a significant predictor ( $F(1,160) = 4.10, p = .04, \eta^2_{\text{partial}} = 0.03$ ), such that women ( $M = 15.74; SD = 3.89$ ) were more comfortable with the PDA than were the men ( $M = 14.69, SD = 4.01$ ). There was also a significant PDA effect ( $F(3,158) = 22.56, p < .01, \eta^2_{\text{partial}} = 0.30$ ). This main effect took the form that participants were most comfortable with the heterosexual PDA, whereas they were least comfortable with transgender displays of PDA.

*Individual difference measures.* Comfortability with PDA significantly affected comfort viewing all scenes of PDA ( $F(3, 158) = 22.59, p < .001, \eta^2_{\text{partial}} = 0.30$ ). This shows that the more comfortable someone is with PDA as an individual difference, the more comfortable an individual is in seeing all types of PDA.

*Homophobia attitudes.* A significant interaction emerged between participant self-reported homophobic attitudes and the scenario types ( $F(3,471) = 28.106, p < .001, \eta^2_{\text{partial}} = .152$ ). This took the form that homophobia significantly affected participant responses in the non-heterosexual scenarios, with more homophobic individuals expressing less comfort.

*Gay attitudes.* A significant interaction emerged between participant self-reported attitudes toward gay men and the scenario types ( $F(3,450) = 11.946, p < .001, \text{partial } \eta^2 = .074$ ). This took the form that attitudes toward gay men significantly affected participant responses in that scenario (relative to other scenarios), with more “less positive” attitudes toward gay men resulting in less comfort.

*Lesbian attitudes.* A significant interaction emerged between participant self-reported attitudes toward lesbians and the scenario types ( $F(3,465) = 6.796, p < .001, \eta^2_{\text{partial}} = .042$ ). This took the form that attitudes toward lesbian women significantly impacted participant responses in that scenario (relative to other scenarios), with less positive attitudes toward lesbian women resulting in less comfort.

*Bisexual attitudes.* A significant interaction emerged between participant self-reported attitudes toward bisexual men and the scenario types ( $F(3,477) = 14.889, p < .001, \eta^2_{\text{partial}} = .086$ ). This took the form that attitudes toward bisexual men significantly impacted participant responses in the gay men scenario. A significant interaction emerged between participant self-

reported attitudes toward bisexual women and the scenario types ( $F(3, 465) = 15.752, p < .001, \eta^2_{\text{partial}} = .092$ ). This took the form that attitudes toward bisexual women significantly impacted participant responses in the lesbian scenario, with less positive attitudes toward bisexual women resulting in less comfort.

*Transgender attitudes.* A significant interaction emerged between participant self-reported attitudes toward transgender individuals and the scenario types ( $F(3,468) = 25.653, p < .001, \eta^2_{\text{partial}} = .141$ ). Attitudes toward transgender individuals significantly impacted participant responses in that scenario (relative to other scenarios), with less positive attitudes toward transgender individuals resulting in less comfort.

### *Discussion*

In this study, we replicated studies one and two, but added a component to examine attitudes toward transgender and bisexual PDA in addition to looking at comfort with lesbian, gay, and heterosexual PDA. As seen in studies one and two, we again found that participants' comfort level with PDA is highest with heterosexual PDA. Also, as seen in studies one and two, participants who self-reported greater comfort with PDA demonstrate a greater level of comfort within each PDA condition. We also found that attitudes towards sexuality (homophobia, attitudes towards bisexuals, transgender, lesbians and gays) all seem to impact the relative comfort people experience in response to the various types of PDA.

### **General Discussion**

Across the three studies, we demonstrated that participants' personal level of comfort level with viewing PDA impacted how they perceived videos featuring demonstrations of PDA. In some ways, one could argue that this is a self-evident relationship. However, to date, no research has looked at a person's level of comfort with PDA; instead, the research has focused on drawing connections to factors beyond PDA, such as differences between cultures (e.g., Fox, 1999) or religiosity (Olson & DeSouza, 2017). As such, this is the first clear scientific demonstration there are differences in how people react to PDA based on their own comfort with PDA.

Overall, comfort levels with PDA were relatively neutral to high, which suggests a certain amount of acceptance toward PDA between individuals of all sexual orientations. Across three studies, we also demonstrated that lesbian and gay PDA is indeed seen less positively than heterosexual displays of PDA. In our third study, we demonstrated that participants perceive transgender PDA with the least amount of comfort. The finding that transgender PDA is rated lowest in comfort among participants is especially noteworthy given that the content of the videos did not change, just information pertaining to the actors in the video (suggesting that it is the participants' personal views towards sexuality that matter).

Homophobia was associated with negativity in response to these displays of PDA amongst sexual minorities, which is in line with previous researchers' findings when examining attitudes toward displays of homosexual relationships and sex (Bernat et al., 2001; Kiebel et al.,

2017; O’Handley et al., 2017; Parrott et al., 2006). When participants self-reported higher tolerance or acceptance toward sexual minorities, their results reflected higher tolerance as well.

### *Implications*

Future research should continue to investigate the utility of our comfort with PDA measure. Although we have established initial discriminant and convergent validity across three studies, this measure would benefit from additional psychometric evaluation (across different populations and world regions). We also believe that this measure can be used by researchers in the future to investigate different effects associated with PDA. Research should be extended to look at participants who are in gay or lesbian relationships to see if they have the same perceptions of PDA as our initial, largely heterosexual samples. Finally, the ultimate establishment of validity would be provided by conducting a field study using confederates.

### *Limitations*

The participants sampled in this study were primarily college students and as a result their attitudes toward PDA might not generalize to other groups or ages. Additionally, the present study did not look at race as a factor in this study as all of our stimuli videos feature Caucasian targets. An evaluation of race and age may yield different results based on the cultural differences that may emerge between different groups. Future studies could include transgender actors in their videos to further increase the validity of the transgender condition (although it is notable that attitudes were different while the actors remained the same). Finally, the sexual minorities represented in this study is not an exhaustive list, and work should continue to evaluate attitudes toward all sexual minorities.

### *Conclusion*

The current study found that comfort levels with PDA were neutral to high regardless of the video subjects. However, lesbian and gay PDA is viewed with less comfort than heterosexual displays of PDA, and transgender PDA is met with the least comfort. We demonstrated that homophobia is associated with lower levels of comfort in response to these displays of PDA in sexual minorities. Finally, it was found that comfort level with PDA is associated with higher levels of comfort with PDA across conditions, but the findings still hold true that sexual minorities are met with the least comfort toward PDA.

Although the laws in the United States have become more progressive in favor of the rights of sexual minorities, these findings suggest that heterosexual individuals are still less comfortable with PDA between sexual minorities than between heterosexual couples. Gay, lesbian, and transgender individuals can legally get married in the United States, but by engaging in acts of PDA, they might face prejudiced reactions from heterosexual individuals. Even if individuals do not explicitly make these couples aware of their feelings, it was demonstrated that many heterosexual individuals had outwardly uncomfortable physical reactions to viewing PDA in sexual minorities, and as a result could still make their feelings known. We would encourage researchers and lawmakers to continue to pay attention to these issues as future laws are being considered, especially in relation to the differences in the informal rights of sexual minorities.

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