#### **ORIGINAL ARTICLE**



# Fragile Heterosexuality: Do Sexual Minorities also Perceive Heterosexuality as Fragile?

Martha Lucia Borras Guevara 100 · Keon West 1

Accepted: 14 April 2023 / Published online: 2 May 2023 © The Author(s) 2023

#### **Abstract**

Previous evidence shows that heterosexual people perceive heterosexual status to be more fragile than homosexual status. However, research has not yet investigated whether sexual minorities have similar, or diverging, perceptions of the fragility of sexual orientation. With a sample that included 89 heterosexual and 80 sexual minority participants, we investigated the fragility of heterosexuality using a between-participants design in which participants indicated their agreement with gender neutral statements about the fragility of either heterosexual or homosexual status. Contrary to our expectations we found evidence of Fragile Heterosexuality perceptions regardless of participants' sexual orientation. Additionally, we explored the potential moderating effects of social-dominance orientation, right-wing authoritarianism and prejudice against gay/lesbian people on this Fragile Heterosexuality effect. For sexual minority participants, high levels of social dominance orientation moderated (i.e., increased) the perceived fragility of heterosexual identity relative to homosexual identity. No other inter-group ideology was a significant moderator. These findings highlight that heterosexuality is perceived as more fragile by both heterosexual and sexual minority individuals. Implications and possible avenues for future research are discussed.

 $\textbf{Keywords} \ \ \text{Fragility perceptions} \cdot \text{Sexual orientation} \cdot \text{Heterosexual identity} \cdot \text{Sexual minority}$ 

## Introduction

Recent studies have shown that heterosexual people perceive heterosexual identity as more fragile (i.e., easily compromised) than homosexual identity (Borras Guevara et al., 2022; Duran et al., 2007; Flanders & Hatfield, 2014; Mize & Manago, 2018; Vandello et al., 2008; West et al., 2021). In other words, it is easier to compromise



Martha Lucia Borras Guevara m.guevara@gold.ac.uk

Goldsmiths University of London, London, UK

or undermine one's status as a heterosexual person, compared to one's status as a homosexual person, by (for example) behaving in a way that is inconsistent with one's professed sexual identity (Duran el al., 2007; West et al, 2021). This phenomenon has been found in different regions of the world including the United States of America (Flanders & Hatfield, 2014; Mize & Manago, 2018), and the United Kingdom (West et al., 2021). However, these studies have only considered the fragility perceptions of heterosexual individuals; none have included in their pool of participants individuals who do *not* identify themselves as heterosexual. Hence, the aim of this research was to investigate whether the Fragile Heterosexuality effect applies to sexual minorities as well as to people who identify as heterosexual. Additionally, a secondary objective was to explore potential psychological explanations for this phenomenon.

Research on fragility perceptions of sexual orientation has shown that a heterosexual individual's views about someone else's *heterosexual* identity change more easily (i.e., require a smaller number of sexually contradictory behaviours) than their views about someone's *homosexual* identity (Duran et al., 2007). In line with this, Flanders and Hatfield (2014) found that targets with a considerable history of opposite-sex attraction, but who had also shown little evidence of same-sex attraction, were nonetheless perceived as a part of a sexual minority group. This classification was particularly inflexible for men compared to women. Further, similarly both Flanders and Hatfield (2014), and Mize and Manago (2018) also found evidence of Fragile Heterosexuality beliefs. However, unlike Flanders and Hatfield, Mize and Manago found that these beliefs applied exclusively to men and not to women.

The findings mentioned above show that (heterosexual) people categorise others as either straight or gay in asymmetrical ways, with heterosexual status being easier to compromise. (Duran et al., 2007; Flanders & Hatfield, 2014; Mize & Manago, 2018; West et al., 2021). While this specific finding is relatively recent, it fits within a larger, older body of research on asymmetrical categorisations. For example, there is evidence for this asymmetry in perceptions of social constructs such as race (specifically Whiteness), sexual purity and manliness, which are perceived as more fragile statuses than Blackness, sexual impurity, and unmanliness (Gottschall et al., 2006; Ho et al., 2013; Khanna, 2010; Vandello et al., 2008; West et al., 2021). In each of these examples, the more fragile category is also the more privileged one, suggesting that fragility beliefs appear to be reflective of hierarchies of status.

An interesting question is whether these asymmetrical perceptions vary with membership in either the more privileged or less privileged group (Abele & Petzold, 1996). In general, judgements of out-groups from in-group members tend to benefit the ingroup to the detriment of the out-group (Brewer & Kramer, 1986; Messick & Mackie, 1989). These differences in views between groups become even more asymmetrical when those judging are part of a privileged, majority group (i.e., White, heterosexual). Specifically, members of privileged groups behave in ways that restrict access to the privileged status, and are thus more likely to interpret ambiguous individuals as part of the non-privileged group (Ho et al., 2013). We therefore predicted that the participants' sexual orientation would moderate the overall Fragile Heterosexuality effect, such that the effect should be weaker or absent for sexual minority participants.



# The Importance of Social Dominance Orientation

Social dominance orientation (SDO) is an individual difference variable that captures preference for group-based hierarchies and inequalities (Pratto et al., 1994; Sidanius et al., 2000; Sidanius & De Laar 2004). Individuals high in SDO tend to endorse beliefs, and policy-related actions, that enhance hierarchical differentiation between groups. This being true, it seems plausible to expect that individual beliefs about the fragility of membership in privileged groups (i.e., having a heterosexual identity) might be linked to individual differences in status concerns. Indeed, Ho and colleagues (2013) found that there was a higher likelihood for White participants, with higher SDO to assign biracial individuals as "Black", even more so when their hierarchical status was under threat, which was interpreted as boundary enforcement by members of the high-status group. Additionally, accentuation theory proposed that when categorizing people into ingroup-outgroup members, individuals feel more compelled to accentuate the differences between groups (Eiser & Stroebe, 1972; Tajfel, 1959). We therefore expected that, for heterosexual participants, the relationship between target (heterosexual status versus homosexual status) and fragility perceptions would be moderated by SDO. This is, that for participants low in SDO the difference in fragility perceptions between heterosexual identity and homosexual identity would be smaller than for individuals who reported higher SDO.

What was less clear was whether and how sexual minority status would interact with SDO to affect fragile heterosexual identity perceptions. In general, we expected sexual minority participants to be less motivated to preserve the categorical boundaries between those of heterosexual and sexual minority status. However, prior research has found mixed results concerning SDO and status-reinforcing behaviours among minorities. On one hand there is evidence that minority-group members who are high in SDO endorse viewpoints that oppose their *own group's interests*. For example, Neville, Coleman, and Falconer (2005) found that African Americans who were high in SDO also showed a preference for interacting with White people and endorsed victim-blaming (i.e., anti-Black) explanations for racial inequalities. However, in contrast, Heaven and Greene (2001) found that African American women who were high in SDO were more likely to endorse anti-White stereotypes. Thus, prior research seems to suggest that SDO should moderate the fragile heterosexuality effect. Nonetheless, it is not clear whether this moderation will serve to strengthen or weaken the Fragile Heterosexuality effect.

## Other Potential Moderators of the Fragile Heterosexuality Effect

Social dominance orientation has been frequently linked to another personality trait; right-wing authoritarianism (RWA), which can be understood as a willingness to submit to authority, preference for tradition, and hostility towards those who disrupt social norms (Ekehammar et al., 2004). Previous research has shown that when judging the race of a biracial target, people high on RWA are more racially biased than their counterparts (Bret et al., 2017; Dhont & Van Hiel,



2011). Hence, it was essential to include this variable in our study to corroborate that the effects of SDO were still unique when compared to other related variables (i.e., RWA).

Like social dominance orientation and right-wing authoritarianism, *prejudice* against gay/lesbian people has also been linked to asymmetrical perceptions of social constructs (Duran et al., 2007; West et al., 2021). However, the effect of these attitudes on fragility perceptions of sexual orientation is not clear. For example, while using an American sample, Duran and colleagues (2007) found that higher levels of prejudice exaggerated the perceived fragility of heterosexual identity relative to homosexual identity. Conversely, using a British sample, West et al. (2021) found no moderation effects of prejudice against gay/lesbian people on fragility perceptions of sexual orientation. As previous evidence is contradictory, we have no clear prediction on the effects of this variable but we believe that its inclusion was important to be able to compare our results with previous findings.

#### The Current Research

This research provides the first quantitative investigation of the asymmetries in how heterosexual identity and homosexual identity are perceived within a sexually diverse sample. The main aim of this study was to find out if the Fragile Heterosexuality effect found with heterosexual participants, across different populations of (i.e., USA, UK) was also found amongst sexual minority participants. Additionally, we wanted to explore if previously studied moderators of this effect, which include social dominance orientation, right-wing authoritarianism and prejudice against gay/lesbian people replicated within our sample.

To address these aims, we recruited sexually diverse participants, and asked individuals about their level of agreement with 14 gender-neutral statements related to the fragility of either heterosexual identity or homosexual identity. Additionally, in order to understand the underlying causes of the effect, we asked participants about their level of social dominance orientation, right-wing authoritarianism and prejudice against gay/lesbian people.

In line with previous research, we expected to find the fragile heterosexuality effect for heterosexual participants. However, we were less confident in our predictions concerning sexual minority participants. Based on prior research, we tentatively expected to find that the fragile heterosexuality effect would be overall weaker for sexual minority participants than for heterosexual participants, but also that SDO would moderate this effect for sexual minority participants. Specifically, sexual minorities high in SDO were expected to show more acceptance of fragile heterosexuality beliefs than those who were low in SDO. In terms of RWA and prejudice against gay/lesbian people, we do not have specific predictions for their effects, nonetheless their inclusion was important to rule out possible alternative explanations of the effect.



#### Methods

# **Participants and Recruitment**

Our total sample consisted of 169 British participants (70 men and 99 women), of which 89 described themselves as straight and 80 as part of a sexual minority group (mean age  $\pm$  SD=24.83 $\pm$ 9.81). In terms of ethnicity, most participants (87%) identified as White, whereas (2.4%) identified as South Asian, (1.8%) as East Asian, (1.2%) as Black and the remaining (7.1%) as part of another Ethnic Group. All participants were recruited via snowball sampling and completed the study via Qualtrics, an online survey platform. Using this platform allowed random assignment to different conditions to be done automatically and removed any interaction with the researchers. Participants were paid for their participation in a £7.50 / hour rate in this study. After exclusions our total sample consisted of 163 participants.

# **Design and Procedure**

The present study used a between-participants design. Participants were randomly assigned to one of two conditions (fragile heterosexual identity vs. fragile homosexual identity). Participants' level of agreement with 14 gender-neutral statements related to each condition were inquired about via a 7-point likert scale (e.g., *fragile heterosexual identity condition*: "If a "straight" person has sex with someone of the same sex, they must really be gay"; *fragile homosexual identity condition*: "If a "gay" person has sex with someone of the opposite sex, they must really be straight"). The statements used in this research were identical to those used by West et al. (2021). This scale showed high internal consistency ( $\alpha$ =0.80, CI [0.74, 0.84]. Additionally, we assessed participants' degree of social dominance orientation, right-wing authoritarianism and prejudice against gay/lesbian people.

To measure social dominance orientation we asked participants to indicate their level of agreement with 10 statements (e.g., "It is OK if some groups have more of a chance in life than others": Pratto, Cidam, Stewart, Zeineddine, Aiello...& Henkel, 2013; Pratto et al., 1994). Similarly, participants reported their level of prejudice against gay/lesbian people, via agreement with five statements. Examples include "e.g., I think homosexuals are disgusting": Herek (1988). Participants' right wing authoritarianism was measured through level of agreement with 15 statements (Zakrisson, 2005). Examples include "There are many radical, immoral people trying to ruin things; the society ought to stop them". Once the previously mentioned sections were answered by participants, they were asked about their gender, age, ethnicity, sexual orientation and religion. All sets of scales showed high internal consistency (social dominance orientation  $\alpha$ =0.91, CI [0.84, 0.86], right-wing authoritarianism  $\alpha$ =0.74, CI [0.75, 0.78], and prejudice against gay/lesbian people  $\alpha = 0.83$ , CI [0.88, 0.89]). The complete survey used in this study, including all statements used for each instrument (i.e., Herek's prejudice against sexual minorities), can be found as an Appendix at the end of this manuscript. The data that support the findings of this study are openly available in the



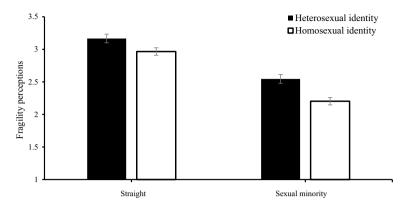


Fig. 1 Effect of participant's sexual orientation on fragility perceptions of a targets' sexual orientation

following link: https://osf.io/9amku/?view\_only=f395f2a7a6ba45a881329afb6666dfa5.

## Results

We ran a univariate analysis that included fragility of sexual orientation as dependent variable, condition (heterosexual fragility vs. homosexual fragility), participants' sexual orientation (straight vs. sexual minority) as fixed factors, whereas SDO, RWA and prejudice against gay people were included as covariates. The model was customized so that all interactions between condition with fixed factors and covariates were analysed.

This analysis revealed a main effect of condition on perceived fragility of sexual orientation, F(1, 159) = 7.08, p = 0.008,  $\eta^2 = 0.045$ ,  $\beta = 1.18$ , CI [0.380, 1.987]. In line with our hypotheses, heterosexual identity (M = 3.05, SE = 0.062, CI [2.93, 3.18]) was perceived as more fragile than homosexuality (M = 2.41, SE = 0.071, CI [2.27, 2.55]). In contrast with our hypotheses, however, participants' sexual orientation did *not* have a significant main effect on fragility perceptions, F(1, 159) = 0.25, p = 0.61,  $\eta^2 = 0.002$ ,  $\beta = 0.13$ , CI [-0.162, 0.421]. Nor did we find a significant interaction of participants' sexual orientation and condition on fragility perceptions: F(1, 159) = 0.65, p = 0.42,  $\eta^2 = 0.004$ ,  $\beta = -0.159$ , CI [-0.549, 0.231]. See Fig. 1.

Additionally, participants who reported higher levels of right-wing authoritarianism (F(1, 159) = 5.45, p = 0.021,  $\eta^2 = 0.002$ ,  $\beta = 0.29$ , CI [0.030, 0.556]), and prejudice against gay/lesbian people (F(1, 159) = 6.11, p = 0.015,  $\eta^2 = 0.039$ ,  $\beta = 0.176$ , CI [-0.083, 0.432]), showed significantly higher perceptions of fragility of a targets' sexual orientation. Participants' social dominance orientation did not have a significant main effect on sexual orientation perceptions (F(1, 159) = 3.01, p = 0.085,  $\eta^2 = 0.02$ ,  $\beta = 0.14$ , CI [-0.078, 0.365]).

Further, none of the interactions included in the model (interactions between condition and all fixed factors and covariates) were significant (all p > 0.43).



#### **Moderation Effects**

As we had a specific interest in whether different personality traits (i.e., SDO, RWA) moderated fragile heterosexual identity perceptions for sexual minorities, we split our dataset into two according to participants' sexual orientation. We therefore ran two separate moderation analyses (via the PROCESS macro Model 1 with pre-standardized variables, 95% confidence intervals (CIs), and 1,000 bias-corrected bootstrap samples) for each sexual orientation (i.e., heterosexual identity and other than heterosexual identity). Fragility of sexual orientation was included as the dependent variable, whereas condition was included as the independent variable. Social dominance orientation, right-wing authoritarianism and prejudice against gay people, were included as moderators in separate analyses.

# Social Dominance Orientation: Effects for Straight Participants

The overall model involving social dominance orientation was significant,  $(F(3, 83) = 13.65, p < 0.001, R^2 = 0.33)$ . Thirty three percent of the variance of the fragility of sexual orientation was explained by condition, social dominance orientation and the interaction between condition and social dominance orientation. Social dominance orientation had a significant main effect (SDO b = 0.434, t(83) = 2.05, p = 0.043), that is, for every unit increase in SDO, there was a 0.434 increase in fragility perceptions of sexual orientation. However, neither condition (b = -1.43, t(83) = -1.24, p = 0.22), or the interaction between condition and social dominance orientation were significant (b = -0.07, t(83) = -0.57, p = 0.58).

# Social Dominance Orientation: Effects for Sexual Minority Participants

The model involving social dominance orientation was significant,  $(F(3, 70) = 16.99, p < 0.001, R^2 = 0.65)$ . Sixty five percent of the variance of the fragility of sexual orientation was explained by condition, social dominance orientation and the interaction between condition and social dominance orientation. With the difference between condition (from heterosexual identity to the homosexual identity), there was a 1.43 decrease in fragility perceptions (condition b = -1.43, t(76) = -4.92, p < 0.001). Additionally, there was a significant contribution of social dominance orientation to this model (SDO b = -0.59, t(70) = -2.36, p < 0.005).

The interaction between condition and social dominance orientation was significant (b=0.58, p=0.004, CI [0.231, 0.922). When SDO was low (i.e., at 1.0), heterosexual identity (2.98) was perceived as more fragile than homosexual identity (1.88) and this difference was fairly large (b=-1.10, t(70)=-6.55, p<0.001). Similarly, at slightly higher levels of SDO (i.e., at 1.3), heterosexual identity (2.97) was perceived as more fragile than homosexual identity (2.05), but this difference was smaller (b=-0.931, t(70)=-6.57, p<0.001). However, when SDO was highest (i.e., at 2.4), heterosexual identity (2.96) was perceived as more fragile than



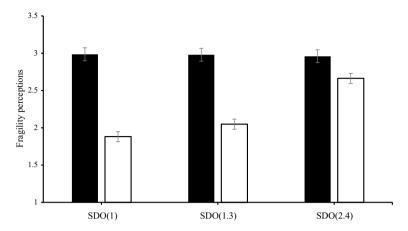


Fig. 2 Moderation effect of social dominance orientation on the relationship between sexual minority participants' fragility perceptions and sexual orientation

homosexual identity (2.66) but this difference was not significant (b = -0.297, t(70) = -1.56, p = 0.12). See Fig. 2 for a graphical representation of the results.

## Right-Wing Authoritarianism: Effects for Heterosexual Participants

The model involving right-wing authoritarianism was significant,  $(F(3, 84) = 14.86, p < 0.001, R^2 = 0.35)$ . Thirty four percent of the variance of the fragility of sexual orientation was explained by condition, social dominance orientation and the interaction between condition and social dominance orientation. However, neither condition (b = -0.53, t(84) = -0.88, p = 0.38), right-wing authoritarianism (b = 0.55, t(84) = 1.69, p = 0.09) or their interaction (b = -0.02, t(84) = -0.11, p = 0.91) had a significant main effect on fragility perceptions of sexual orientation.

# Right-Wing Authoritarianism: Effects for Sexual Minority Participants

The model involving right-wing authoritarianism was significant,  $(F(3, 69) = 14.33, p < 0.001, R^2 = 0.38)$ . Thirty eight percent of the variance of fragility perceptions of sexual orientation was explained by condition, right-wing authoritarianism and their interaction. With the difference between condition (from heterosexual identity to the homosexual identity), there was a 1.79 decrease in fragility perceptions (condition b = -1.79, t(69) = -2.98, p = 0.004). There was no significant contribution of right-wing authoritarianism (b = -0.27, t(69) = -0.75, p = 0.45) or its interaction with condition (b = 0.39, t(69) = 1.72, t(69) = 0.09) to this model.



# Prejudice Against Gay People: Effects for Straight Participants

The model involving prejudice against gay/lesbian people was significant,  $(F(3, 84) = 12.41, p < 0.001, R^2 = 0.55)$ . Thirty percent of the variance of fragility perceptions of sexual orientation was explained by condition, prejudice against gay/lesbian people and their interaction. With the difference between condition (from heterosexual identity to the homosexual identity), there was a 0.78 decrease in fragility perceptions (condition b = -0.78, t(84) = -2.72, p = 0.007). Nonetheless, neither prejudice against gay/lesbian people (b = 0.07, t(84) = 0.36, p = 0.72) or its interaction with condition (b = 0.17, t(84) = 1.05, p = 0.29) contributed in a significant way to this model.

# Prejudice Against Gay People: Effects for Sexual Minority Participants

The model involving prejudice against gay/lesbian people was significant,  $(F(3, 76) = 18.86, p < 0.001, R^2 = 0.65)$ . Forty three percent of the variance of fragility perceptions of sexual orientation was explained by condition, prejudice against gay/lesbian people and their interaction. With the difference between condition (from heterosexual identity to homosexual identity), there was a 0.89 decrease in fragility perceptions (condition b = -0.89, t(70) = -3.50, p < 0.001). Nonetheless, neither prejudice against gay/lesbian people (b = 0.19, t(70) = 0.71, p = 0.48) or its interaction with condition (b = 0.13, t(70) = 0.72, p = 0.47) contributed in a significant way to this model.

# Discussion

This study investigated fragility perceptions of sexual orientation (i.e., heterosexual and homosexual identities) within a sexually diverse sample of British participants. Consistent with previous literature, we predicted and found that heterosexual status was perceived as more fragile than homosexual status. Contrary to our expectations, however, this effect did not vary depending on the sexual orientation of the participants; that is, both heterosexual and sexual minority participants perceived heterosexual status to be more fragile than homosexual status, and to the same degree.

In this sample, we found no evidence that social dominance orientation moderated the fragile heterosexuality effect for heterosexual participants. Interestingly, and in contrast, we did find that social dominance orientation moderated the fragile heterosexuality effect amongst *sexual minorities* such that higher levels of SDO in a direction that *weakened* the fragile heterosexuality effect. In other words, sexual minorities who were low in SDO perceived heterosexual status to be much more fragile than homosexual status, while sexual minorities who were high in SDO perceived a smaller difference between the fragility of heterosexual identity and that of homosexual identity. No other variable that we investigated (RWA, prejudice) moderated the fragile heterosexuality effect.



Based on the idea that ingroup members judge the outgroup in a way that benefits their own group but is in detriment of the outgroup (Lewicka, 1989; Peeters and Czapinski, 1991), we expected that sexual minority participants would find the homosexual identity as more fragile than the heterosexual identity. Contrary to our main prediction, the results found here showed that participant's sexual orientation does not have a significant effect on fragility perceptions of a targets' sexual orientation. For both heterosexual and sexual minority participants, heterosexual identity was perceived as more fragile (i.e., easy compromised) than homosexual identity. We believe that we did not find the expected results due to the normative nature of the heterosexual identity. To put it simply, the heteronormative construct of sexual orientation supersedes the positivity bias in judgements towards ingroup members. Similar findings have been found in other, related domains. For example, African Americans also endorse the one-drop rule of racial identity (Khanna, 2010), thereby perceiving outgroup membership (Whiteness) more fragile than ingroup membership (Blackness).

In terms of social dominance orientation, our initial expectation was that it was going to have a significant moderative effect on the relationship between condition and fragility perceptions of sexual orientation for straight participants. More specifically, we predicted that the difference in fragility perceptions would be greater for straight participants who reported high SDO, than for straight participants who reported low SDO. Previous research on boundary enforcement has suggested that when the privileged category is under threat, people tend to reinforce the categories' boundaries by making them stricter and hence more fragile (Ho et al., 2013). It is possible the lack of moderation effects by SDO for heterosexual participants, was due to a lack of threat or concern about their privileged heterosexual status. Future research (more similar to that of Ho et al., 2013) that includes an element of status-based threat, might be more successful at finding the moderating effect of SDO.

Perhaps more interestingly, with respect to the results found for sexual minority participants, we found that SDO *reduced* the fragile heterosexuality effect. This pattern or results may reflect participants' desire for their own category (i.e., sexual minority) to be more fragile and hence be the privileged category while at the same time being influenced by the generalized normativity of heterosexuality identity. Indeed (see Fig. 2), for sexual minority participants, perceptions of the fragility of heterosexual identity did not change with their levels of SDO. It was only the perceptions of the fragility of homosexual identity (i.e., their ingroup status) that changed (i.e., grew more fragile) as SDO increased. This is similar to previous research showing that high levels of SDO within women of a racial minority group (e.g., Black women) predicted more anti-White attitudes, what was explained as a strategy to bolster the minority group (Heaven & Greene, 2001). This suggests that, despite being perceived overall as belonging to the less fragile category, minority group members who are high in SDO may increase the perceived fragility of their ingroup as a way to bolster their status in group hierarchies.



#### **Limitations and Future Studies**

The current research focused on asymmetrical fragility perceptions of heterosexual and homosexual identities within a sexually diverse population. Sexual orientation is a fluid concept, hence heterosexual identity and homosexual identity do not represent the range of possible identities. However, this approach was necessary for the current study to be able to compare our results with previous literature in which these were the categories used. We acknowledge that future studies should include more diversified categorization of sexual orientation. For instance, statements presented to participants could be related not only to heterosexual and homosexual identities, but perhaps to bisexual and asexual identities. Indeed, sexual minority participants in our sample who reported high perceptions of both heterosexual identity and homosexual identity fragility must have been implicitly categorizing people to some other category that was neither heterosexual nor homosexual. Further research including multiple categories would allow us to clarify how these categorisations were made.

Additionally, future studies could include gender of the target. Previous literature has shown that perceptions of women seem to be less strict than men when defining the boundaries of sexual orientation of others (Kinnish et al., 2005). This effect of target gender might again reflect that women's categorization processes are more flexible than those of men, which would be very interesting to confirm.

Within heterosexual participants, there is a possibility that the lack of moderating effects of SDO on the relationship between fragility perceptions and condition was a reflection of their privilege status not being put under threat. Future research should explore methods in which the heterosexual, privileged status is put at risk. For example, participants could be exposed to information about new policies that benefit sexual minorities but not heterosexual identities.

We included social dominance orientation, right-wing authoritarianism and prejudice against gay/lesbian people as possible moderators of the relationship between sexual orientation and fragility perceptions. Recently published literature has studied other moderators that include estimates of gay/lesbian population, contact quantity and contact quality (West et al., 2021). Perhaps the inclusion of all of these personality traits on subsequent studies will help understand the underlying causes of the fragile heterosexuality effect.

#### **Conclusions**

Prior literature has shown that heterosexual identity is perceived as more fragile than homosexual identity. This investigation extended those findings by: (a) Demonstrating that this effect occurs regardless of sexual orientation (i.e., straight and sexual minority) (b) Validating that the effect can be found within a sexually diverse sample when using gender neutral statements; and (c) Finding novel evidence that social dominance orientation moderates the relationship between sexual orientation and perceptions of fragility of sexual minority individuals. No matter participants'



sexual orientation, heterosexual identity was considered more fragile than homosexual identity. Within sexual minority participants the difference in fragility perceptions between heterosexual identity and homosexual identity was smaller when individuals reported higher levels SDO, than when they reported high levels of SDO. These findings highlight the scope of heteronormativity in our society.

# **Appendix**

# Full List of Fragile Heterosexuality Items Shown to Participants

- (1) If a "straight" person has sex with someone of the same sex, they must really be gay
- (2) It only takes one gay experience for a person to no longer be straight
- (3) Heterosexuality is not a permanent state, people can slip into homosexuality
- (4) Under certain conditions any heterosexual person can be tempted by homosexuality
- (5) For some "straight" people, the only thing between them and being gay is a few drinks
- (6) Even if a "straight" person has fooled around with someone of the same sex in the past, that still doesn't make them homosexual
- (7) A "straight" person might have fantasised about someone of the same sex in the past, but that doesn't make them homosexual
- (8) If a "straight" person has thought about what it would be like to have sex with someone of the same sex, that still doesn't mean that s/he is gay
- (9) Being attracted to someone of the same sex at some point doesn't change the fact that a person is straight
- (10) Even if someone has had his/her share of same-sex encounters in the past, it doesn't change the fact that a person is straight
- (11) Just because someone has had some same-sex sexual experience in the past, that doesn't mean that s/he is gay
- (12) You can't describe yourself as straight if you have fooled around with someone of the same sex
- (13) If you have had a same sex encounter, no matter how long ago it might have been, then you can't describe yourself as straight
- (14) If a person has had more opposite-sex sexual experiences than same-sex sexual experiences, then it is probably OK to describe them as straight

## **Social Dominant Orientation**

- (1) It is OK if some groups have more of a chance in life than others
- (2) Inferior groups should stay in their place
- (3) To get ahead in life, it is sometimes okay to step on other groups
- (4) We should have increased social equality



- (5) It would be good if groups could be equal
- (6) We should do what we can to equalize conditions for different groups
- (7) In setting priorities, we must consider all groups.
- (8) We should not push for group equality.
- (9) Group equality should be our ideal.
- (10) Superior groups should dominate inferior groups

# **Right wing Authoritarianism**

- (1) There are many radical, immoral people trying to ruin things; the society ought to stop them.
- (2) Our forefathers ought to be honoured more for the way they have built our society, at the same time we ought to put an end to those forces destroying it.
- (3) Our country needs free thinkers, who will have the courage to stand up against traditional ways, even if this upsets many people.
- (4) God's laws about abortion, pornography and marriage must be strictly followed before it is too late, violations must be punished.
- (5) Many good people challenge the state, criticize the church and ignore "the normal way of living".
- (6) Our society would be better off if we showed tolerance and understanding for untraditional values and opinions.
- (7) The society needs to show openness towards people thinking differently, rather than a strong leader, the world is not particularly evil or dangerous.
- (8) The "old-fashioned ways" and "old-fashioned values" still show the best way to live.
- (9) Our country needs a powerful leader, in order to destroy the radical and immoral currents prevailing in society today.
- (10) It is better to accept bad literature than to censor it.
- (11) The situation in the society of today would be improved if troublemakers were treated with reason and humanity.
- (12) If the society so wants, it is the duty of every true citizen to help eliminate the evil that poisons our country from within.
- (13) People ought to put less attention to the Bible and religion, instead they ought to develop their own moral standards.
- (14) Facts show that we have to be harder against crime and sexual immorality, in order to uphold law and order.
- (15) It would be best if newspapers were censored so that people would not be able to get hold of destructive and disgusting material.

# **Prejudice Against Gay People**

- (1) I think homosexuals are disgusting.
- (2) Homosexuality is a perversion.
- (3) Homosexuality is a natural expression of sexuality.



- (4) Sex between two people of the same sex is just plain wrong.
- (5) Homosexuality is merely a different kind of lifestyle that should NOT be condemned.

Author Contributions Authors Martha Lucia Borras Guevara and Keon West contributed to the study conception and design. Material preparation, data collection and analysis were performed by Authors Martha Lucia Borras Guevara, and Author Keon West. All authors read and approved the final manuscript.

**Funding** This work was supported entirely by the ERC (European Research Council), via the starting grant. Author Martha Lucia Borras Guevara and Keon West were supported by this grant.

## **Declarations**

**Conflict of interest** The authors have no conflicts of interest to disclose.

**Ethical Approval** This study was performed in line with the principles of the Declaration of Helsinki. Approval was granted by the Ethics Committee of X University.

Consent to Participate Informed consent was obtained from all individual participants included in this study.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit http://creativecommons.org/licenses/by/4.0/.

#### References

Abele, A., & Petzold, P. (1996). Asymmetrical evaluation of ingroup versus outgroup members: A look from an information integration perspective. European Journal of Social Psychology, 26(2), 219–231.

Borras Guevara, M. L., West, K., Brambilla, M., & Bruckmüller, S. (2022). Fragile heterosexuality: A cross-cultural study between germany and italy. *Sexuality & Culture*, 1–20.

Bret, A., Beffara, B., McFadyen, J., & Mermillod, M. (2017). Right wing authoritarianism is associated with race bias in face detection. *PLoS ONE*, 12(7), e0179894.

Brewer, M. B., & Kramer, R. M. (1986). Choice behavior in social dilemmas: Effects of social identity, group size, and decision framing. *Journal of Personality and Social Psychology*, 50(3), 543.

Dhont, K., & Van Hiel, A. (2011). Direct contact and authoritarianism as moderators between extended contact and reduced prejudice: Lower threat and greater trust as mediators. *Group Processes and Intergroup Relations*, 14(2), 223–237.

Duran, A., Renfro, L., Waller, M., & Trafimow, D. (2007). Perceptions of sexual orientation: A hierarchically restrictive trait. *Sex Roles*, 57(9–10), 763–773. https://doi.org/10.1007/s11199-007-9293-2

Eiser, J. R., and Stroebe, W. (1972). Categorization and social judgment.



- Ekehammar, B., Akrami, N., Gylje, M., & Zakrisson, I. (2004). What matters most to prejudice: Big five personality, social dominance orientation, or right-wing authoritarianism? *European Journal of Personality*, 18(6), 463–482.
- Flanders, C., & Hatfield, E. (2014). Social perception of bisexuality. *Psychology and Sexuality*, 5(3), 232–246. https://doi.org/10.1080/19419899.2012.749505
- Gottschall, J., Allison, E., De Rosa, J., & Klockeman, K. (2006). Can literary study be scientific?: Results of an empirical search for the virgin/whore dichotomy. *Interdisciplinary Literary Studies*, 7(2), 1–17.
- Heaven, P., & Greene, R. (2001). African Americans' stereotypes of whites: Relationships with social dominance orientation, right-wing authoritarianism, and group identity. *The Journal of Social Psychology*, 141(1), 141–143.
- Ho, A. K., Sidanius, J., Cuddy, A. J. C., & Banaji, M. R. (2013). Status boundary enforcement and the categorization of black—white biracials. *Journal of Experimental Social Psychology*, 49(5), 940–943. https://doi.org/10.1016/j.jesp.2013.04.010
- Kinnish, K. K., Strassberg, D. S., & Turner, C. W. (2005). Sex differences in the flexibility of sexual orientation: A multidimensional retrospective assessment. Archives of sexual behavior, 34, 173–183.
- Khanna, N. (2010). "If your're half Black, you're just Black": Reflected appraisals and the persistence of the One-Drop Rule. *The Sociological Quarterly*, 51(1), 96–121.
- Messick, D. M., & Mackie, D. M. (1989). Intergroup relations. *Annual Review of Psychology*, 40(1), 45–81.
- Mize, T., & Manago, B. (2018). Precarious sexuality: How men and women are differentially categorized for similar sexual behavior. *American Sociological Review*, 83(2), 305–330. https://doi.org/10.1177/0003122418759544
- Pratto, F., Sidanius, J., Stallworth, L. M., & Malle, B. F. (1994). Social dominance orientation: A personality variable predicting social and political attitudes. *Journal of Personality and Social Psychology*, 67(4), 741–763. https://doi.org/10.1037/0022-3514.67.4.741
- Pratto, F., Çidam, A., Stewart, A. L., Zeineddine, F. B., Aranda, M., Aiello, A., Chryssochoou, X., Cichocka, A., Cohrs, J. C., Durrheim, K., Eicher, V., Foels, R., Górska, P., Lee, I-C., Licata, L., Liu, J. H., Li, L., Meyer, I., Morselli, D., . . . Henkel, K. E. (2013). Social dominance in context and in individuals: Contextual moderation of robust effects of social dominance orientation in 15 languages and 20 countries. Social Psychological and Personality Science, 4(5), 587–599.
- Sidanius, J., & De Laar, C. (2004). Social dominance theory: Its agenda and method. *Political Psychology*, 25(6), 845–880.
- Sidanius, J., Levin, S., Liu, J., & Pratto, F. (2000). Social dominance orientation, anti-egalitarianism and the political psychology of gender: An extension and cross-cultural replication. European Journal of Social Psychology, 30(1997), 41–67. https://doi.org/10.1002/(SICI)1099-0992(200001/02)30:1%3c41::AID-EJSP976%3e3.0.CO;2-O
- Tajfel, H. (1959). Quantitative judgement in social perception. *British Journal of Psychology*, 50(1), 16–29
- Vandello, J. A., Bosson, J. K., Cohen, D., Burnaford, R. M., & Weaver, J. R. (2008). Precarious manhood. *Journal of Personality and Social Psychology*, 95(6), 1325–1339. https://doi.org/10.1037/a0012453
- West, K., Borras-Guevara, M. L., Morton, T., & Greenland, K. (2021). Fragile heterosexuality. *Social Psychology*, 52(3), 143–161. https://doi.org/10.1027/1864-9335/a000444
- Zakrisson, I. (2005). Construction of a short version of the right-wing authoritarianism (RWA) scale. *Personality and Individual Differences*, 39(5), 863–872.

**Publisher's Note** Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

