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journal homepage: www.elsevier.com/locate/jespThe role of gender and safety concerns in romantic rejection decisions[☆]Gili Freedman^{a,*}, Andrew H. Hales^b, Darcey N. Powell^c, Benjamin Le^d, Kipling D. Williams^e^a St. Mary's College of Maryland, Department of Psychology, 18952 E Fisher Rd, St. Mary's City, MD 20653, USA^b University of Mississippi, Department of Psychology, Peabody Hall, Oxford, MS 38677, USA^c Roanoke College, Department of Psychology, 221 College Lane, Salem, VA 24153, USA^d Haverford College, Department of Psychology, 370 Lancaster Ave., Haverford, PA 19041, USA^e Purdue University, Department of Psychology, 703 Third Street, West Lafayette, IN 47907-2081, USA

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ABSTRACT

Considerable research has examined how people feel when interpersonally rejected. Less attention has been paid to the rejectors, especially on *how* they reject. Rejection methods can range from direct (i.e., informing the target) to indirect (i.e., ghosting), and the method and motives regarding rejection strategies are important because rejected targets often react negatively to rejection, sometimes even violently. It is imperative, therefore, to understand why people reject the way they do, especially when their rejections may yield unexpected negative consequences. A key factor that may influence rejection method decisions, particularly in the context of romantic rejections, is the gender of the target. Drawing on prior research indicating that men are perceived as more dangerous, in this registered report we hypothesized that bisexual individuals may be more likely to endorse ghosting if the target is a man, especially when safety concerns are made salient. A pilot study supported this hypothesis in a sample of mostly heterosexual individuals. The main study tested this hypothesis in a sample of bisexual individuals in order to manipulate target gender as a within-subjects variable and to better understand romantic rejection processes in an understudied sample. Overall, we found that safety concerns may make individuals more likely to engage in ghosting, but how that decision interacts with target gender was less clear.

'Why do men feel threatened by women?' I asked a male friend of mine.... 'They're afraid women will laugh at them,' he said... Then I asked some women students in a quickie poetry seminar I was giving, 'Why do women feel threatened by men?' 'They're afraid of being killed,' they said. (Atwood, 1984, p. 413)

Rejecting a romantic partner or potential partner can be a difficult interaction, and, in the worst cases, an interaction that can end in violence, particularly for women rejecting men (Farr, 2019; Leary, Kowalski, Smith, & Phillips, 2003). Therefore, would-be-rejectors may choose to pursue a more indirect strategy of rejection, such as ghosting, to avoid a potentially violent response, and this choice may be affected by the gender of the would-be-target. In the proposed research, we examine the roles of target gender and safety concerns on romantic rejection strategy decisions in a sample of bisexual individuals. We also explore the role of rejector gender and other motives (i.e., ghosting may seem like an easy option, but may incur costs to one's reputation) on

romantic rejection strategy decisions.

Social rejection can be a particularly difficult and threatening interpersonal interaction for both the rejected individual (i.e., the target) and the rejecting individual (i.e., the rejector). A great deal of research has explored the negative consequences of rejection for targets (Feeney, 2004; Leary, Springer, Negel, Ansell, & Evans, 1998; Smart Richman & Leary, 2009; Stenseng, Belsky, Skalicka, & Wichström, 2014; Twenge, Baumeister, Dwall, Ciarocco, & Bartels, 2007; Twenge, Baumeister, Tice, & Stucke, 2001; Warburton, Williams, & Cairns, 2006) and one common response to being rejected is for the target to react aggressively (Leary et al., 2003; Leary, Twenge, & Quinlivan, 2006; Romero-Canyas, Downey, Berenson, Ayduk, & Kang, 2010; Warburton et al., 2006; Wesselmann, Butler, Williams, & Pickett, 2010). It is therefore unsurprising that would-be-rejectors face a difficult situation (Baumeister, Wotman, & Stillwell, 1993; Legate, DeHaan, Weinstein, & Ryan, 2013; Poulsen & Kashy, 2011; Zadro & Gonsalkorale, 2014) in

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which they are concerned for the target's feelings, their own reputation, and the emotional difficulty of rejecting (Baumeister et al., 1993; Ciarocco, Sommer, & Baumeister, 2001; Folkes, 1982) but also, potentially, for their own safety. Furthermore, the concern for safety may be heightened for individuals who are rejecting men (Stratmoen, Greer, Martens, & Saucier, 2018; Stratmoen, Rivera, & Saucier, 2020), and this concern could influence the manner in which a person chooses to reject.

One domain of social rejection in which gender may be particularly important is romantic rejection. Romantic rejection shares a number of features with the broader category of social rejection. Rejection, across domains, causes targets to experience hurt feelings and lowered levels of fundamental needs such as belongingness and self-esteem (Williams, 2007). For example, using the silent treatment as a form of rejection has similar consequences among romantic partners and friends (Böckler, Rennert, & Raettig, 2021). However, romantic rejection may be especially hurtful for the recipient and difficult for the initiator (Sprecher, Felmlee, Metts, Fehr, & Vanni, 1998).

Most individuals experience at least one relationship dissolution/break-up (Norona, Olmstead, & Welsh, 2017; Rhoades, Kamp Dush, Atkins, Stanley, & Markman, 2011), and the dissolution may occur for a variety of reasons (Le, Dove, Agnew, Korn, & Mutso, 2010; Norona et al., 2017). Moreover, even though rejectors tend to experience less post-dissolution distress than targets (Koessler, Kohut, & Campbell, 2019a; Sprecher et al., 1998), the process of deciding whether to terminate a relationship is difficult and involves multiple factors (Joel, Impett, Spielmann, & MacDonald, 2018). Upon deciding to dissolve the relationship, individuals must decide how to do so. Rejection decisions may affect the outcomes for both rejectors and targets (Freedman, Williams, & Beer, 2016; Koessler et al., 2019a; Molden, Lucas, Gardner, Dean, & Knowles, 2009; Pancani, Mazzoni, Aureli, & Riva, 2021). For example, rejectors who use ghosting experience less distress than rejectors who use a more direct strategy (Koessler et al., 2019a); however, individuals generally find ghosting to be an unacceptable strategy to end romantic relationships, particularly long-term ones (Freedman, Powell, Le, & Williams, 2019) and this may lead to negative views about rejectors who use ghosting. Yet, there is mixed evidence about whether ghosting and other forms of indirect rejection lead to more negative outcomes than more direct forms of rejection (Koessler et al., 2019a; Molden et al., 2009; Pancani et al., 2021).

Previous research has not yet examined why people choose one type of rejection (e.g., explicit rejection or ghosting) over another, and understanding the rejection decisions that people make is critical for understanding the two-sided nature of social rejection. Rejectors have many options for the methods they could use to reject another person (Baxter, 1982, 1984; Collins & Gillath, 2012; Freedman et al., 2016; Sprecher, Zimmerman, & Abrahams, 2010; Wilmot, Carbaugh, & Baxter, 1985). One way in which breakup strategies vary is based on their level of directness, which can subsequently affect the experiences of both the target and the rejector. Individuals can end relationships directly through explicit rejection (e.g., open confrontation) or in a more indirect manner (e.g., withdrawal, avoidance; Baxter, 1982; Collins & Gillath, 2012; Sprecher et al., 2010). Explicit rejections can occur through both face-to-face communication as well through technology mediated communication (e.g., texting, phone calls; Collins & Gillath, 2012; Weisskirch & Delevi, 2012). Indirect strategies include creating a scenario to manipulate the partner into breaking up with the would-be rejector, de-escalating the relationship, as well as avoiding and withdrawing from the partner (Collins & Gillath, 2012). Ghosting is the ultimate avoidance and withdrawal strategy for an indirect relationship dissolution, whereby the rejector unilaterally ceases all communication with their partner (Freedman et al., 2019; Koessler et al., 2019a; LeFebvre et al., 2019) and expects the recipient to “get the message.”

1. Relationship dissolution

Although romantic relationship rejectors use both direct and indirect

strategies, indirect strategies are often viewed as the less acceptable (Freedman et al., 2019), less compassionate choice, and lead to increased negative emotions for the rejection target (Baxter, 1982; Collins & Gillath, 2012; Sprecher et al., 2010; however, see Koessler et al., 2019a for evidence that distress does not differ based on breakup strategy). As such, in this project we chose to compare explicit rejection to ghosting. Given the generally negative outcomes associated with indirect strategies, such as ghosting, it is important to consider the factors that lead rejectors toward their rejection strategy decisions.

Ghosting, as an indirect rejection strategy, has gained a great deal of attention recently (Freedman et al., 2019; Koessler, Kohut, & Campbell, 2019b, 2019a; LeFebvre, 2017; LeFebvre et al., 2019; LeFebvre, Rasner, & Allen, 2020; LeFebvre & Fan, 2020; Manning, Denker, & Johnson, 2019; Navarro, Larrañaga, Yubero, & Vllora, 2020a, 2020b; Pancani et al., 2021; Powell, Freedman, Williams, Le, & Green, 2021; Thomas & Dubar, 2021; Timmermans, Hermans, & Oprea, 2020). Ghosting can occur at any point in a romantic interaction (e.g., upon connecting on a dating app, after years of committed dating; Koessler et al., 2019a) but is a particularly common rejection strategy among individuals on dating apps (De Wiele & Campbell, 2019; Timmermans et al., 2020). Studies vary in the reported rates of individuals who have experienced ghosting, as either the initiator or the recipient (Freedman et al., 2019; Koessler et al., 2019b). But all reports may be underestimations of the actual rates due to negative attitudes toward the use of ghosting (Freedman et al., 2019; LeFebvre, 2017).

Decisions to engage in direct versus indirect rejections are based on a number of dyadic factors including intimacy and similarity (Banks, Altendorf, Greene, & Cody, 1987; Baxter, 1982) as well as individual differences such as attachment style (Collins & Gillath, 2012). Although more work is needed, researchers have begun to explore individual differences in attitudes toward and usage of ghosting (Freedman et al., 2019; Navarro et al., 2020a, 2020b; Powell et al., 2021). However, scholars have paid less attention to the role of demographic factors, such as gender, in the rejection decision-making process more generally, or in ghosting specifically.

There is some evidence, though, that women in heterosexual relationships tend to be more likely to initiate a breakup compared to men (Baumeister et al., 1993; Folkes, 1982; Rosenfeld, 2017), and that men and women may differ in their breakup strategies depending on their personality. For example, women with lower levels of compassionate love or higher levels of Machiavellianism are more likely to use indirect or manipulative breakup strategies than direct strategies (Brewer & Abell, 2017; Sprecher et al., 2010). An unexplored question is how situational motivations may play a role in gender differences in the choice of breakup strategy.

2. Motivations for romantic rejection

Qualitative research has revealed a number of motives for the use of indirect romantic rejections, like ghosting, rather than direct romantic rejections. For example, individuals have shared that they either have ghosted or believe they were ghosted because the rejector did not know what to say, wanted to avoid hurt feelings, was no longer interested in the target, met someone new, perceived the relationship as not serious enough to warrant a direct rejection, were engaging in a retaliatory act, or to ensure their own safety (Koessler et al., 2019b, 2019a; LeFebvre et al., 2019, 2020; Manning et al., 2019; Timmermans et al., 2020). Three broad motives that are likely to contribute to would-be-rejectors' use of ghosting are ease of rejection, concerns about their reputation, and safety concerns.

Although the difficulty of engaging in rejection is often underestimated (Bohns & DeVincent, 2018; Joel, Teper, & MacDonald, 2014), a key consideration for choosing a rejection method is likely to be the ease with which the rejection can be accomplished. Would-be-rejectors often feel guilty or uncomfortable engaging in rejection (Baumeister et al., 1993; Bohns & DeVincent, 2018; Poulsen & Kashy, 2011) and do

not always know what to say (Folkes, 1982). For example, when given the option, would-be-rejectors take shortcuts to avoid having to construct a personalized rejection (Tom Tong & Walther, 2010). Therefore, ghosting may be a compelling option when ease of engaging in rejection is a salient priority.

Rejectors may also be concerned about their reputations: social rejectors are perceived negatively, and they are aware of this perception (Baumeister et al., 1993; Besson, Roloff, & Paulson, 1998; Folkes, 1982; Tom Tong & Walther, 2010). Ghosting is generally seen as a particularly negative form of social rejection. For example, individuals are unlikely to endorse ghosting as an acceptable strategy for ending friendships or romantic relationships, and a majority of people indicate that they would think poorly of someone who ghosted (Freedman et al., 2019). Thus, when reputation costs are made salient, individuals may be less likely to choose ghosting as a strategy.

In terms of safety, ghosting can allow a rejector to end a relationship without engaging in an interaction, which may be protective for would-be-rejectors who fear angry responses or physical harm from the would-be-target. Ghosting provides an alternative avenue for ending a relationship without inviting a continued interaction with a potentially angry or aggressive ex-partner. Although safety concerns may be most salient in a face-to-face interaction, rejectors may still experience fear in technology mediated communication such as texting or a phone call. Any rejection attempt, whether face-to-face or through technology mediated communication, may provoke a reaction from the target (even if the target then must travel to the source to enact the aggression, the rejection itself is still a provocation that is otherwise absent in a ghosting situation). Specifically, individuals who have ghosted cite concerns that direct rejection could lead to verbal abuse or stalking (Timmermans et al., 2020).

Yet safety concerns may not be as universal as other motives such as ease of rejecting and protecting one's reputation. It is possible that concern for safety as a motivation for ghosting may be part of a broader gendered dynamic in relationships. For example, women are more likely to be stalked by an ex-partner, and men are more likely to engage in the stalking of ex-partners (Dreßing, Bailer, Anders, Wagner, & Gallas, 2014; Perilloux & Buss, 2008). Thus, men and women may differ in their perception of how risky it is to end a relationship with a direct rejection.

3. Gender, risk, and social rejection

Across a range of different romantic and sexual scenarios, women, compared to men, tend to perceive higher levels of risk (Bede & Cooper, 1999; Conley & Collins, 2002; Conley & Peplau, 2010). Furthermore, perceptions of risk can drive decision-making within these romantic contexts. For example, gender differences in the acceptance of casual sex offers are eliminated when perceptions of risk are reduced (Conley, 2011).

Additionally, the gender of the interaction partner plays a critical role in risk perception. For example, in a set of studies on the acceptance of casual sex offers, participants viewed men who proposed casual sex as more dangerous than women who proposed casual sex (Conley, Rubin, Matsick, Ziegler, & Moors, 2014). In these studies, the researchers were able to control for the gender of the recipient of the casual sex offer by recruiting bisexual individuals and having them rate both men and women proposers. Although participants perceived men to pose more physical danger than women in response to both vignettes and in response to recalled experiences, the differences in danger perception did not directly affect willingness to accept casual sex offers (Conley et al., 2014). It is an open question whether potential differences in risk perception of would-be-targets of romantic rejection will affect rejection decisions.

Beyond risk perception, gender is an important variable across multiple aspects of romantic interactions. For example, gender plays a role in how individuals initiate romantic relationships (Taylor et al., 2013), their engagement in sexual behaviors (Horowitz & Spicer, 2013;

Owen & Fincham, 2011), and the roles that partners take within their relationships (Kuzio, 2021). Gender may be particularly important to consider within the context of romantic rejection given the association of romantic rejection and violence against women (Farr, 2019).

Thus, in the present research we examine the rejection strategies (i. e., ghosting versus explicit rejection) that individuals endorse in response to men and women targets. A majority of the prior research on romantic relationships and thus romantic rejections has focused on heterosexual samples (Olmstead, 2020) and thus conflates rejector and target gender. In the main study, we recruit a sample of bisexual individuals and use a within subjects design to examine how target gender specifically affects endorsement of rejection strategies. Furthermore, we vary the salience of potential risk across the targets. Finally, we also consider the role of rejector gender in exploratory analyses. Although target gender is a key element of potential safety concerns, rejector gender may also play a role: women rejectors may feel more physically vulnerable than men due to differences in size and physical strength. For example, although women may be somewhat more likely to engage in physical aggression toward a partner, women are more likely to be injured than men (Archer, 2000).

4. Overview of present research

In two studies, the role of gender and safety concerns in romantic rejection decisions are examined. The pilot study provides a preliminary test of the hypothesis that individuals will be more likely to choose an indirect rejection strategy when the target of rejection is a man and when safety concerns are made salient. In the main study, the methodology of the pilot study is refined to further test the main hypothesis: participants will be more likely to ghost targets who are men rather than targets who are women when safety concerns are salient. In both studies, we examine safety concerns as well as two other motives (ease of rejecting and reputation concerns). We are not predicting an effect of target gender on the other two motives, but we included these additional motives to explore whether only safety motives differ based on gender, or if other potential motives may also differ based on gender.

5. Pilot study

In this study, we report all measures, manipulations and exclusions. Hypotheses, exclusion criteria, and stopping rule were preregistered (see Preregistration at the following <https://osf.io/zdfj9/>). We deviated from the preregistered plan in two ways. First, the hypothesis was mis-specified in the preregistration. The preregistered hypothesis was that in the safety concerns condition, women would be more likely to ghost than men. In the initial conceptualization of the study, we assumed a predominately heterosexual sample, so the hypothesis was framed in terms of participant gender, rather than target gender. Because of this, in the preregistration, the independent variable is slightly mis-specified as *participant gender*, rather than *target gender*. Instead, we tested the hypothesis that participants would be more likely to ghost targets who were men rather than targets who were women in the safety concerns condition. The results with the original specification are fully reported in the online materials (see Supplementary Analyses at the OSF Link). Second, our preregistered exclusion criteria were overly conservative and would have led to nearly an 80% exclusion rate (see Participants for details). Therefore, we report the results of the preregistered sample on OSF and present the data from a modified set of exclusion criteria below. The Institutional Review Board at the second author's institution approved the study.

5.1. Method

5.1.1. Participants

Participants were 352 university students who completed the study online for partial course credit (an additional 3 cases were identified to

be duplicate responders and removed from analysis). The preregistered analysis plan outlined screening any participants who either a) indicated that their data should not be used in a data-quality screening question at the end of the survey ($n = 38$) or did not answer this question ($n = 8$), or b) failed an attention check embedded within the 66 scenarios ($n = 256$), or did not answer this question ($n = 12$).

However, as noted above, these exclusion criteria were problematic. First, surprisingly, a large majority of participants (75%) failed the attention check (which, subtly embedded following the full text of an entire scenario, asked participants to “Please select the option second from the right for this item”). It is possible that this sample was unusually inattentive – however, for reasons and analyses explained below – it appears more likely that the attention check was too subtle to accurately detect careless responding. Therefore, the present analysis includes those who gave an unintended answer on the attention check. Second, as described below, an initial branching question asked participants if they would prefer to see male or female potential romantic partners in the survey. Nearly a quarter of the respondents, $n = 83$ (24%) selected to see targets of a gender that did not correspond to their stated sexual orientation. It appears that many misread this question to be asking, *what is your gender* (one participant emailed the researcher to have the survey re-set because they made this exact mistake). Therefore, the present analysis excludes participants who, based on this screening question, ended up rating targets of a gender that did not match their stated sexual orientation (i.e., this screens out heterosexual men who rated men, gay men who rated women, and so on). This produced a final analytic sample of 239 total participants (175 women, 63 men, 1 not specified; 90% heterosexual; $M_{\text{age}} = 18.71$, $\text{Range} = 18\text{--}33$ years; $SD = 1.42$; 79% White, 9% Black or African American, 5% Hispanic, 5% Asian, 2% reported something else). The results based on the preregistered exclusion criteria are on OSF.

5.2. Design

Participants rated their intentions to ghost 66 different targets in a 2 (Target Gender: Man vs. Woman) \times 4 (Motive: Unspecified/control vs. Ease vs. Reputation vs. Safety) mixed design. Target-gender varied between-subjects, with each participant rating ghosting intentions for either men the entire time or for women the entire time. Motive varied within each participant, and also within each scenario; one of the four motives was independently randomly assigned and presented on each of the 66 trials (the randomization of motive occurred without replacement, and independently on each trial).

5.2.1. Procedure

After consenting to participate, participants were introduced to the purpose of the study by reading the following:

This study is about romantic breakups. No one likes to end things with a romantic partner, but sometimes there's just no other choice. In these situations, the question is not whether to end things, but how to end things.

So, for all of the scenarios that follow, we would like you to assume that you need to break things off with the person described.

In general, there are two ways to do this. First, you could tell them explicitly that the relationship is over (we'll call this “explicitly rejecting”). This could involve a face-to-face conversation, a phone call, or even a direct email. The point is just that you tell them clearly that you will no longer be together with them.

The second way is that you could ignore them until they get the picture (we'll call this “ghosting”). Here you would just not respond to any of their messages or calls, and you would also not initiate contact with them.

For the scenarios that follow, your job is to read the situation carefully, and then indicate the extent to which you would either explicitly reject the person versus ghost them (or if you are unsure or have only a slight preference, then indicate something in the middle).

After reading these instructions, participants were asked, “For the next part of the study you can see MALE romantic partners or FEMALE

romantic partners. Which do you prefer to see?” Participants who selected *male* saw scenarios describing men, and participants who selected *female* saw scenarios describing women. As indicated above, 83 participants selected (and were thus shown/asked to rate) scenarios that did not correspond to their sexual orientation. These cases were excluded from the present analyses but included in the analysis on OSF based on the preregistered sample.

Scenarios. Scenarios were crafted to represent a range of dating situations, durations, and reasons why one might want to end a relationship. They broadly fell into categories of general compatibility ($k = 11$), infidelity and trust issues ($k = 9$), negative characteristics/antisocial behavior ($k = 25$), physical incompatibility ($k = 7$), family/friend incompatibility ($k = 7$), and other ($k = 7$). For example, in an infidelity and trust scenario, participants read, “You've been on three dates with John [Jane] and learn that he [she] has been texting with his [her] ex”. Additionally, in a negative characteristics/antisocial behavior scenario, participants read, “You've been dating Jeremy [Jenny] for three months and you have realized that he [she] is constantly complaining about one thing or another. Nothing ever seems to be good enough.” The full list of scenarios is available in the study materials on OSF.

Originally, we aimed to present 70 total scenarios, however, due to an error in the survey randomization, four of the scenarios were not correctly displayed to participants; these four scenarios were mistakenly omitted from the survey for participants rating women, and, for participants rating men, one of these scenarios contained a typo omitting gender pronouns. Therefore, these four scenarios were removed from analyses, leaving 66 total scenarios in the final analysis.

Gender Manipulation. The scenarios were presented in a random order. Participants were notified at the beginning that “there are many scenarios (about 70), so please plan accordingly.” Each scenario was arranged to describe either a man or a woman, with names matched loosely based on length and phonetic similarity (e.g., a scenario appears describing either “Adam” or “Anna”). The gender pronouns in the scenario were also arranged to correspond to the gender of the target. Participants who selected to see males were shown names of men targets throughout, and those who selected to see females were shown names of women targets throughout.

Motive Manipulation. The stated motive for ending the relationship was randomly assigned on each trial. Following the main text of the scenario, participants read one of four motives. On *control* trials they read, simply “You want to end your relationship.” On *ease* trials, they read, “You want to end your relationship and want to find a way to do it as easily as possible.” On *reputation* trials, they read, “You want to end your relationship but you are concerned other people will think poorly of you for how you end your relationship.” And, finally, on *safety* trials they read, “You want to end your relationship but are concerned that he [she, depending on gender] might be so upset that he [she] will possibly physically lash out at you when the relationship ends.” These motives were randomly assigned with replacement on each trial, such that participants would see each motive approximately a quarter of the time, and each scenario would be paired with each motive on about a quarter of the presentations. Each participant rated 66 total targets (with one person who skipped a trial), producing 15,773 ratings.

Measures. For the dependent variable, on each trial, participants responded to the question, “How would you end things,” on a scale from 1 (*I would definitely explicitly reject him [her]*) to 10 (*I would definitely ghost him [her]*).

After completing all of the scenario ratings, for exploratory purposes, participants also completed the 8-item Rejection Sensitivity Questionnaire (Downey & Feldman, 1996), and the 22-item Implicit Theories of Relationships Questionnaire (Knee, Patrick, & Lonsbary, 2003). These questionnaires are part of a larger research program and not relevant for the present study.

Analytic Approach. To account for non-independence because of nesting within both participants/scenarios, and to model scenario as a random factor, we analyzed the results using mixed models with the

lme4 package in R (Bates, Maechler, Bolker, & Walker, 2015). As indicated in the preregistration, the exact random effect structure was not specified a priori (as it was not possible to know which random effect could be included and still have the models converge). Our approach was to include random intercepts for both participants and scenarios, as well as random slopes for the key interaction of interest.

Target Gender was represented with a dichotomous variable (1 for men, and 0 for women). Motive was represented with a set of dummy codes, with the control condition as the reference group. This produced three terms, each comparing one of the Motives (Ease, Reputation, and Safety) to the Control trials. Finally, three interaction terms were computed as the product of gender, and the dummy codes. Thus, the model included 7 fixed effects (Gender main effect, three Motive dummy codes, and three Gender x Motive interaction terms). Of particular interest to our analysis is the Gender x Safety interaction term, which indicates whether the effect of the safety motive on ghosting intentions was greater for women than for men. The final models included the most maximal random effects structures that would converge, which included the by-scenario random slopes of the key interaction term between gender and the control versus safety condition dummy code. To break down the predicted Gender x Motive interaction, we also ran follow-up models comparing gender within just the control condition, and within just the safety condition.

Individual ratings were bimodally distributed, with the most common responses being the scale maximum and scale minimum. In the ultimately-fit models, the residuals were normally distributed, so we proceeded with the analyses as planned. The average ghosting rating was near the scale midpoint ($M = 5.00$, $SD = 3.26$).

5.3. Results

There was a Gender x Safety concerns interaction (see Fig. 1), indicating that the effect of the safety motive was greater for intentions to ghost men than women, $b = 0.86$, $t(249.20) = 3.51$, $p < .001$. In the control condition men targets did not elicit detectably more ghosting than women targets, $b = 0.37$, $t(234.89) = 1.86$, $p = .065$, $d = 0.11$; however, supporting the primary hypothesis, in the safety condition men targets elicited more ghosting than women targets, $b = 1.20$, $t(238.67) = 5.11$, $p < .001$, $d = 0.37$.

5.3.1. Exploratory analysis

To verify our assumption that the majority of participants failed the attention check because it was unduly subtle (rather than the alternative – that most participants were inattentive), we conducted the same analyses, performed on only the subset of participants who failed the attention check. If the attention check was an appropriate screen of careless responding, this analysis should be largely noise and show smaller – even null – results. Alternatively, if the attention check inadvertently screened even attentive responders, then the analysis should detect significant effects, in a pattern similar to that observed with only those who passed the attention check. This is a plausible possibility, given that of the 66 scenarios, all except for the one containing the attention check ended with the statement of motive. Only in the attention check condition did the scenario continue on with information after that sentence. Participants may have gotten in the habit of discontinuing reading after seeing the motive and therefore missed the attention check.

This analysis suggests that the attention check was overly sensitive. There was a robust Motive by Gender interaction, $b = 0.68$, $t(410.9) = 5.70$, $p < .001$, with no apparent gender effect in the control condition, $b = 0.13$, $t(241.76) = 0.70$, $p = .482$, $d = 0.04$, and men being ghosted more than women in the safety condition, $b = 0.76$, $t(253.60) = 3.81$, $p < .001$, $d = 0.23$. This both provides further evidence that our key hypothesis survives a meaningful robustness check, and also suggests that the attention check screen was overly sensitive. In the main study we have identified an attention check screening procedure that is more

appropriate.

6. Main study

Based on the results of the Pilot Study, the Main Study tested the hypothesis that when safety concerns are heightened, individuals rejecting men will be more likely to say they would use ghosting compared to explicit forms of rejection. To test the effect of target gender while controlling for rejector gender, we recruited a sample of individuals who identify as bisexual. With this sample, we were able to manipulate target gender as a within subjects variable, as in prior research on the effects of target gender in romantic interactions (Conley et al., 2014). We also conducted exploratory analyses examining the interactive effects of target gender and rejector gender on rejection decisions when safety concerns are salient. Finally, we explored whether there are participant and target gender effects for the other two motives: ease of rejecting and reputation concerns. Although we were predicting that target gender would interact with safety concerns to predict rejection decisions, we did not predict a similar interaction for the other two motives.

6.1. Method

6.1.1. Participants

We conducted a power analysis with a method outlined by Lane and Hennes (2018). We conducted 1000 simulations informed by the parameter estimates identified in the pilot study (see OSF page for code of the power analysis). These simulations indicated that 350 participants each answering 25 scenarios provides 94% power to detect the hypothesized target gender x safety interaction. Additionally, to provide greater power for testing exploratory three-way interactions and to account for potentially needing to exclude participants from analyses (see Exclusion Criteria), we aimed to recruit an extra 50% of participants for a final target sample size of 526 participants (263 men, 263 women). We did not anticipate that this many participants would be excluded but decided to err on the side of caution. The stopping rule for data collection was when the target sample size was reached or when three weeks had elapsed since the study was posted, whichever occurred first.

Participants were recruited via Prolific using the following criteria: currently residing in the United States, fluent in English, have not completed any of our previous studies on ghosting, and identify as bisexual. Two separate studies were set up on Prolific: one to recruit 263 individuals who identify as men and the other to recruit 263 individuals who identify as women. At the time of planning, there were 4913 participants on Prolific who met these requirements. A total of 534 people accessed the survey. The study was expected to take approximately 20 min, and participants were compensated with \$2.67 (expected rate of \$8.01 per hour). Participants took 12.66 min on average to complete the study. The Institutional Review Board at the first author's institution approved the study.

Exclusion Criteria. Following the preregistration (<https://osf.io/zdfj9/>), participants were excluded from analyses for the following reasons: 1) if they failed ($n = 0$) or did not complete ($n = 8$) the attention check, 2) if they indicated we should not use their data on the data quality question ($n = 6$) or did not answer the data quality question ($n = 0$), or 3) if they indicated that they are not romantically interested in both men and women ($n = 106$; see Measures). This produced a final analytic sample of 414 total participants (236 women, 164 men, 6 non-binary, 5 trans-binary, 3 responded with something else; $M_{age} = 25.47$, $Range = 18$ – 59 years; $SD = 7.07$; 72% White, 9% Hispanic, 8% Bi/Multiracial, 5% African/African American/Black, 5% Asian/Asian American).

6.2. Design

Participants rated their intentions to ghost 25 different targets in a 2

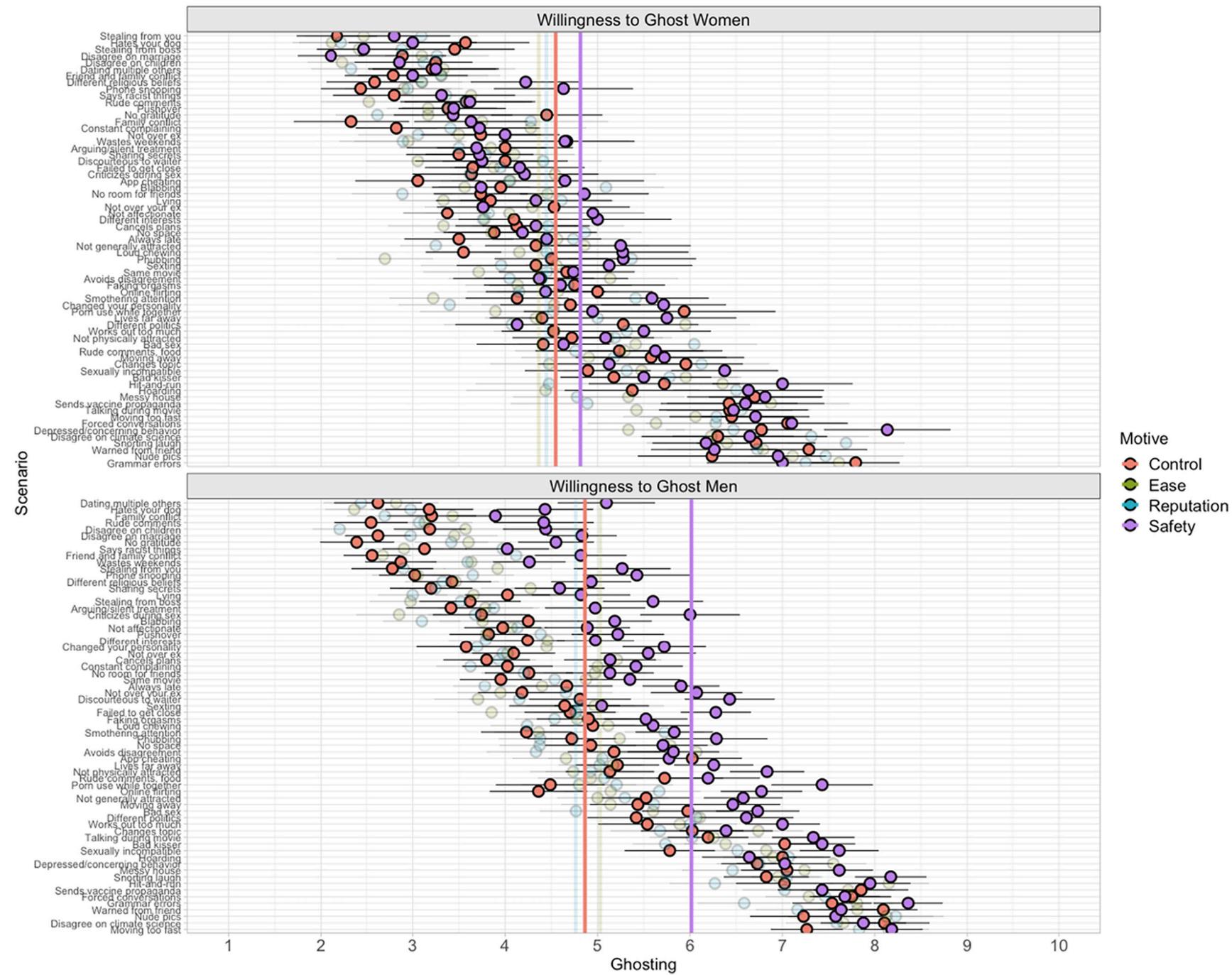


Fig. 1. Average willingness to ghost men and women for each scenario based on the motive presented in the Pilot Study. Note. Motive information was independently randomly generated for each of the 66 scenarios. The data points for control and safety are emphasized as they were the focal comparisons. Error bars denote \pm standard error of the mean.

(Target Gender: Man, Woman) x 4 (Motivation: Safety, Reputation, Ease, Control) completely within-subjects design. In the pilot study, target gender varied between-subjects, with each participant rating ghosting intentions for either men the entire time or for women the entire time; for the Main Study, target gender varied within each participant. Thus, both motive and gender were randomly assigned to each of the scenarios. The 25 scenarios that each participant viewed were randomly selected from the original 70 scenarios developed for the Pilot Study (however, some names have been altered; see Supplemental Materials on OSF). One of the 70 scenarios contained a minor typo in which 106 participants saw a description with a pronoun missing from the description (these trials were retained as this exclusion was not preregistered, and the scenario contained other mentions of gender that would likely have continued to convey the relevant information. Reanalyzing with these cases included does not appreciably change the results).

6.2.1. Procedure

After consenting to participate, participants were introduced to the purpose of the study by reading the same instructions from the Pilot Study (see Supplemental Materials on OSF for instructions, scenarios, and measures) with two changes. First, instead of seeing the “For the next part of the study you can see MALE romantic partners or FEMALE romantic partners. Which do you prefer to see?” participants were instead told “You will see scenarios involving people of different genders and different reasons for breaking up.” Second, the description of explicit rejection included texting; it read: “This could involve a face-to-face conversation, a phone call, a text, or even a direct email.” Participants were kept on the instructions page for fifteen seconds before they were able to click to move to the next page. After reading the instructions, participants were asked a multiple-choice question in which they needed to indicate which of the options best described the task they were about to complete. If they answered incorrectly, they were shown the instructions page again. All participants then viewed the 25 random targets with gender and motive randomly assigned for each and were asked how they would end the relationship described in each scenario.

Gender Manipulation. A random subset of 25 – out of the pool of 70 – scenarios were presented to each participant, in a random order. Each scenario was arranged to describe either a man or a woman, with gender-suggestive names matched loosely based on length and phonetic similarity (e.g., a scenario appears describing either “Adam” or “Anna”). The gender pronouns in the scenario were arranged to correspond to the gender of the target. The gender of each target was randomly assigned and varied within each participant.

Motive Manipulation. The stated motive for ending the relationship was randomly assigned on each trial. The manipulation occurred in the same manner as in the Pilot Study. Each participant rated 25 total targets, which produced a total of 10,350 ratings.

6.2.2. Measures

Dependent Variable. On each trial, participants responded to the question, “How would you end things,” on a scale from 1 (*I would definitely explicitly reject him [her]*) to 10 (*I would definitely ghost him [her]*). Individual ratings were again bimodally distributed, with the most common responses being the scale maximum and scale minimum. In the ultimately-fit models, the residuals were normally distributed, so we proceeded with the analyses as planned. The average rating was near the scale midpoint ($M = 4.36$, $SD = 3.33$).

Demographic Questions. Participants were asked to indicate their age, gender, race/ethnicity, romantic interest, sexual orientation, and relationship history. For romantic interest, participants were asked two questions: Are you romantically interested in men (Yes, No) and are you romantically interested in women (Yes, No). Participants who did not respond with “yes” to both questions were excluded.

Attention Check. Within the demographic items, there was a question that stated, “To make sure that you are paying attention, we would

like you to select ‘5’ for this question.” Participants who selected the wrong number or did not answer this question were excluded from analyses.

Data Quality Check. At the end of the study, participants were presented with the following question: “It is very important that we have high-quality data, and the accuracy of responses will directly impact our research findings, so if you feel that we should not use your data for any reason, click “no” below, and we will remove your responses from the study with no penalty to you - you'll still be paid! It's just important that we have truthful and accurate responses here. Thank you for your time. Should we use your data from this study?” Participants who selected “No” or did not answer the question were excluded from analyses.

6.2.3. Analytic approach

We followed an analysis plan similar to the pilot study: to account for non-independence due to nesting within both participants/scenarios, and to model scenario as a random factor, we analyzed the results with mixed models, including random intercepts for participants and scenarios, as well as many random-slopes as were able to be converged (with priority given to random slopes of Gender, Safety, and Gender x Safety). Data were analyzed using the lme4 package in R (Bates et al., 2015). Simple effects of target gender were again tested separately for control trials, and for safety-motive trials (where we expected to see a larger gender effect).

6.3. Results

Fig. 2 shows the average ghosting intentions for each scenario, by target gender and motive. The Gender x Safety concerns interaction was not statistically significant, $b = 0.02$, $t(190) = 0.15$, $p = .881$. In the control condition men targets elicited significantly more ghosting than women targets, $b = 0.45$, $t(1242.78) = 3.97$, $p < .001$, $d = 0.13$. In the safety condition men targets also elicited significantly more ghosting than women targets, $b = 0.51$, $t(79.51) = 4.19$, $p < .001$, $d = 0.15$.

6.3.1. Exploratory analysis

Given the apparently large effect of safety concerns for both men and women, we performed simple effects tests comparing the effect of safety concerns on ghosting intentions (compared to the control condition) separately for both men and women. Safety concerns significantly increased intentions to ghost men, $b = 1.87$, $t(119.41) = 10.42$, $p < .001$, $d = 0.56$, and also significantly increased intentions to ghost women, $b = 1.77$, $t(177.46) = 12.17$, $p < .001$, $d = 0.53$.

To see if men and women responded differentially to the gender and motive manipulations, we conducted an exploratory analysis testing the three-way interaction between these factors, with a particular interest in the interaction term representing whether the difference between target gender-induced responsiveness to the safety motive itself varies as a function of participant gender. This term was not significant, $b = -0.47$, $t(173.1) = -1.91$, $p = .058$, nor was the two-way *target* gender x safety motive interaction within participants who are men, $b = -0.24$, $t(862.54) = -1.01$, $p = .315$, nor within participants who are women, $b = 0.27$, $t(149.2) = 1.23$, $p = .220$. Additional exploratory analyses showed that the two-way *participant* gender x safety motive interaction was also not significant for ratings of men, $b = -0.38$, $t(193.81) = -1.24$, $p = .217$, nor for ratings of women, $b = 0.06$, $t(245.01) = 0.20$, $p = .843$.

Finally, we explored potential gender interactions with the motives for ease, and reputation (by fitting an additional model that included random effects for these terms, as they were not included in the primary model to achieve convergence). There was some indication that the effect of ease was greater for women targets than for men targets, interaction $b = -0.33$, $t(138.73) = -2.13$, $p = .035$. More strongly, however, the effect of reputation appeared to vary as a function of target gender, $b = -0.42$, $t(277.26) = -2.64$, $p = .009$, with reputation concerns decreasing ghosting intentions for targets who are men, $b = -0.27$, t

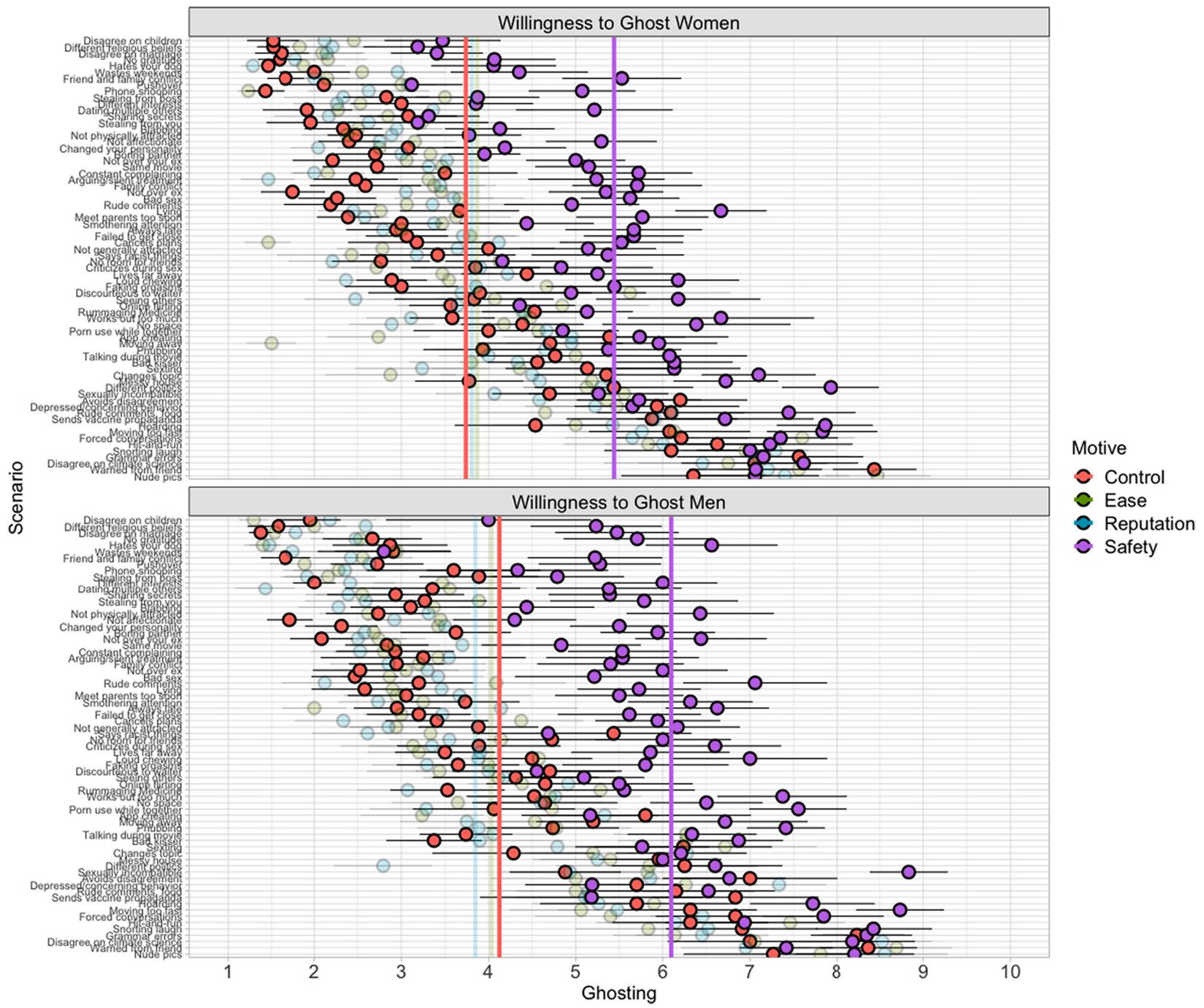


Fig. 2. Average willingness to ghost men and women for each scenario based on the motive presented in the Main Study.

(66.80) = -2.17 , $p = .034$, $d = -0.08$ but not targets who are women, $b = 0.08$, $t(314.89) = 0.72$, $p = .472$, $d = 0.02$.

6.4. Discussion

This series of studies sought to examine how specific motives may influence the dissolution strategy used when rejecting a romantic partner (i.e., ghosting versus a more direct strategy; Baxter, 1982; Collins & Gillath, 2012; Freedman et al., 2019; Sprecher et al., 2010), as well as whether gender of the rejection target may impact the dissolution strategy used. Prior qualitative research has identified multiple motives for why individuals use ghosting as a romantic relationship dissolution strategy rather than more direct strategies for relationship dissolution, including wanting to ensure would-be-rejectors own safety (Koesler et al., 2019b, 2019a; LeFebvre et al., 2019, 2020; Manning et al., 2019; Timmermans et al., 2020). The present studies are the first quantitative studies to manipulate the motives participants considered amid relationship dissolution situations. Overall, we found that safety concerns may make individuals more likely to engage in ghosting, but how that decision interacts with target gender was less clear.

In romantic relationship rejection situations, gender may be an especially important factor to consider due to the link between rejection and violence against women (Farr, 2019; Leary et al., 2003). In line with this idea, in the pilot study, when safety concerns were made salient, men were ghosted more than women. However, there was no difference in ghosting intentions based on target gender in the control condition. In the main study, the pattern shifted: the participants were more willing to ghost men than women in both the control condition and the safety concerns condition. In other words, although the pilot study indicated that target gender and safety concerns were interacting to lead to greater intentions to ghost men when safety concerns were salient, the main study did not support that idea. Instead, in the main study, safety concerns elicited greater intentions to ghost regardless of target gender or the interaction of participant and target gender.

One of the key differences between the pilot study and the main study was the samples. In the pilot study, most of the sample consisted of heterosexual women, whereas the main study intentionally sampled bisexual men and women. Thus, one possibility is that assessments of risks related to ghosting may vary based on sexual orientation. We recruited bisexual participants for the main study to allow for within subjects comparisons based on target gender, but it is also possible that these direct comparisons may have changed the way that participants thought about their ghosting intentions. It will be important in future research to examine ghosting intentions based on safety in samples that include a wider range of sexual orientations.

Although there were differences between the findings in the pilot study and main study, participants in both studies indicated being more likely to engage in ghosting when safety concerns were salient. However, the present data cannot indicate whether ghosting is actually an effective strategy for reducing safety concerns. Ghosting can be conceptualized as an example of ostracism—being ignored and excluded. That ghosting exists primarily over social media does not minimize its negative consequences for targets (e.g., Williams, Cheung, & Choi, 2000; Wolf et al., 2015). According to Williams's Temporal Need Threat model of Ostracism, targets will attempt to fortify the need or needs that were most threatened by ostracism. One way to fortify a threatened sense of control and acknowledgement is to provoke a response from the ostracism source, and aggression (verbal and physical) is one way to provoke responses (Williams, 2009). Thus, in several studies, ostracism has led to increased aggressive behavior (e.g., Ren, Wesselmann, & Williams, 2018; Warburton et al., 2006; Williams & Wesselmann, 2011). Furthermore, participants respond with more symbolic aggression after recalling a time they were ghosted compared to a time when they were explicitly rejected (Pancani, Aureli, & Riva, 2022). Therefore, it is possible that if individuals use ghosting to avoid risking their physical safety, that strategy could backfire. In qualitative

interviews with individuals who experienced frequent or long-term silent treatment from their partners, targets sometimes reported that they resorted to verbal or physical aggression in order to provoke any kind of response from their partners (Williams, 2001). Furthermore, threats to physical safety are not the only safety concerns that individuals may have in relation to ghosting. Would-be-ghosters may also worry about stalking, intimidation, and other forms of retaliation, and these concerns may play different roles in decisions to ghost.

Broader research on rejection has also found that a would-be-rejector's concern about their own reputation and perceived difficulty in the process of rejecting play into their rejecting decisions (Baumeister et al., 1993; Besson et al., 1998; Ciarocco et al., 2001; Folkes, 1982; Tom Tong & Walther, 2010). Thus, we also examined ease of engaging in rejection and the potential effects of rejecting on one's reputation as motives for choosing a rejection method. In exploratory analyses in the main study, we found that participants were more likely to intend to ghost when ease of rejecting was made salient if the rejection target was a woman. In other words, ghosting may seem like a better strategy if one's goal is to reject the target as easily as possible, but specifically when one is rejecting a woman. One possibility is that would-be-rejectors are stereotyping women as more emotional (e.g., Sprecher & Sedikides, 1993) or talkative (e.g., Mehl, Vazire, Ramírez-Esparza, Slater, & Pennebaker, 2007) and are thus attempting to avoid engaging in what they perceive as a potentially prolonged or difficult conversation. In addition, exploratory analyses showed that participants were less likely to intend to ghost if potential costs to one's reputation were made salient and the rejection target was a man. That is, ghosting a man may seem like a less positive option when one is concerned about how a third party will feel about them as the rejector. Thus, future research can consider whether there are greater reputational costs associated with ghosting a man compared to ghosting a woman. Taken together, these exploratory analyses point to the need to conduct more research on how target gender and motive may influence rejection method.

6.5. Limitations and future directions

Although the main study sampled understudied populations in relationship science, used a repeated measures design to manipulate target gender while controlling for rejector gender, examined multiple motives, and engaged in open science practices, there are a few limitations that must be acknowledged. First, there are constraints on the generalizability of our results, given that participants in the present studies resided in the United States, were fluent in English, and most identified as cis-gender men or cis-gender women as well as White. Nevertheless, our focus on bisexual men and women also allowed us to broaden the relationship science literature, which has historically relied predominately on heterosexual samples (Olmstead, 2020; Williamson et al., 2021). However, surprisingly little recent research has examined similarities and differences in relational processes between heterosexual and non-heterosexual samples (cf. Chonody, Killian, Gabb, & Dunk-West, 2020; Kurdek, 2004, 2006), and future work should continue to investigate motivations to ghost between bisexual, gay, lesbian, and heterosexual relationships. Additionally, cultural and sub-cultural differences may impact individuals' engagement in ghosting as well as their motives for using ghosting. As such, future research should consider other individual differences that might contribute to differences in individuals' ghosting intentions and behaviors, including the intersectionality of such factors.

Second, the present studies did not evaluate participants' recent relationship dissolution behaviors and their perceived motives for using a specific strategy. Rather, the studies used vignettes to examine participants' intentions to use ghosting versus a more direct relationship dissolution strategy in hypothetical situations. We acknowledge that individuals' intentions do not always match their behaviors (Sheeran & Webb, 2016). However, intentions do provide valuable information on

individuals' likely behaviors (Sheeran & Webb, 2016; Sutton, 1998). Furthermore, given the variable rates of individuals' engagement in ghosting (Freedman et al., 2019; LeFebvre et al., 2019; Powell et al., 2021), it can be difficult to capture ghosting as it happens among broad samples of adults. Future research may consider employing longitudinal designs that sample participants who are actively engaged in the dating world to capture the dissolution strategies they initiate or experience as they unfold, rather than relying on retrospective or hypothetical reports as prior research has done.

To reflect the variability in relationships, the vignettes used in this study varied in how long participants had hypothetically been connected or in a relationship with their target of rejection, as well as varied in their specificity of how they had met their hypothetical partner (e.g., online, in the community, via mutual friends). Given the frequency of ghosting on dating apps (De Wiele & Campbell, 2019; Halversen, King, & Silva, 2021; Thomas & Dubar, 2021; Timmermans et al., 2020), future research may consider restraining or purposefully manipulating the modality of meeting the prospective partner. Furthermore, given that ghosting is perceived relatively negatively, especially in longer-term relationships (Freedman et al., 2019), future research may also consider restraining or purposefully manipulating the length of connection or relationship with the prospective partners.

Third, safety concerns can be conceptualized in multiple ways. The present studies specifically examined concerns about physical safety. However, participants' intentions to use ghosting may have been different had a different aspect of safety been emphasized, such as their psychological safety, emotional safety, or cyber safety. For example, Biolcati, Pupi, and Mancini (2021) examined ghosting behaviors based on concerns about direct aggression perpetration and victimization as well as control/monitoring perpetration and victimization. Furthermore, future research could consider other motives (e.g., disinterest in target, seriousness of relationship) and how they directly influence individuals' usage of ghosting compared to other relationship dissolution strategies.

The present studies also used a specific conceptualization of ghosting (i.e., "... you could ignore them until they get the picture (we'll call this 'ghosting'). Here you would just not respond to any of their messages or calls, and you would also not initiate contact with them." Acknowledging that different definitions of ghosting exist (De Wiele & Campbell, 2019; Koessler et al., 2019b; LeFebvre et al., 2019; Thomas & Dubar, 2021), future research may consider examining how motives contribute to individuals' engagement in different types of ghosting (e.g., Biolcati et al., 2021; Halversen et al., 2021). Furthermore, additional research is necessary to explore targets' post-dissolution behaviors based on the dissolution strategy used by the rejector. For example, there may be differences in targets' engagement in physical, emotional, and virtual (e.g., cyberstalking, retaliatory sharing of messages or photos) aggressive behaviors as they acknowledge and process the relationship's dissolution. In addition, although most rejection research focuses on the targets' emotional experiences, it will be important to examine the emotional consequences for rejectors depending on the type of rejection they choose (e.g., explicit rejection, ghosting). For example, people who have used ghosting report lower levels of distress than people who have used more explicit rejection to end a romantic relationship (Koessler et al., 2019a), but the time course of emotional consequences has yet to be explored. Future research should address whether the perceived short-term emotional benefits of ghosting for the ghoster may be reduced over time.

7. Conclusion

In 1984, Margaret Atwood posed the question of why men and women feel threatened positing the idea that while men fear ridicule, women fear for their life. In the present set of studies, we examined how the gender of a rejection target may influence would-be-rejectors' intentions about methods of rejection. We found that ghosting may seem

more appealing than explicit rejection when people fear for their physical safety but mixed evidence about how gender plays a role in this preference. Taken together, the present research points to the need to continue to examine how target gender, rejector gender, and motivations affect the ways in which people choose to engage in romantic rejections.

Note. Motive information was independently randomly generated for each of the 70 scenarios. The data points for control and safety are emphasized as they were the focal comparisons. Error bars denote \pm standard error of the mean.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jesp.2022.104368>.

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