

Gender differences in interpersonal trust: Disclosure behavior, benevolence sensitivity and workplace implications

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ARTICLE INFO

Keywords:

Interpersonal trust
Gender differences
Self-disclosure
Social perception
Work relationships
Organizational trust
Relational norms

ABSTRACT

Across four studies ($N = 4,727$), we investigate gender differences in interpersonal trust in work relationships. Drawing on gendered socialization experiences, we propose that feeling able to engage in self-disclosure (*disclosure-based trust*) is a more fundamental aspect of interpersonal trust for women than for men. Because self-disclosure entails social and emotional risks, we further expect and find that female trustors are more sensitive to others' benevolence when forming interpersonal trust judgments. Lastly, we show that these gender differences in disclosure-based trust and benevolence sensitivity are associated with divergent responses to benevolent others. Specifically, we test a moderated mediation model and find that benevolent supervisors are associated with higher quality supervisor relationships and greater well-being for women than for men, mediated through higher levels of disclosure-based trust. We discuss the implications of these findings for work relationships and career outcomes.

1. Introduction

Interpersonal trust has been linked to numerous positive outcomes in organizations, such as stronger employee performance, better communication, and more organizational citizenship behaviors (Alexopoulos & Buckley, 2013; Colquitt, Scott, & LePine, 2007; Crossley, Cooper, & Wernsing, 2013; Dirks & Ferrin, 2002; Ferris et al., 2009; Fulmer & Gelfand, 2012; van der Werff & Buckley, 2017). Conversely, a lack of trust inhibits cooperation and increases the need for employee monitoring (Mayer & Gavin, 2005). Due to the vital role of trust in organizational functioning, past research has extensively examined its antecedents and consequences (Dirks & Ferrin, 2001; Lewicki, Tomlinson, & Gillespie, 2006). Our work extends this literature by documenting how gender may be a factor in interpersonal trust.

Consistent with past research, we define trust as one's willingness to be vulnerable to the actions of another, based on positive expectations of the trustee's actions (Mayer, Davis, & Schoorman, 1995; Simpson, 2007). This acceptance of vulnerability is manifested as a willingness to engage in a variety of behaviors, which expose the trustor to harm if trust is violated. In trust games, for instance, trust is manifested as a willingness to pass money to one's partner, despite the risk that it may

not be returned (Berg, Dickhaut, & McCabe, 1995). In interpersonal relationships, trust is manifested in behaviors such as confiding one's innermost thoughts or feelings, sharing negative information about oneself, or seeking input or help on challenging issues, despite the risks of rejection, disapproval and betrayal (Currall & Judge, 1995; Gillespie, 2011; McEvily & Tortoriello, 2011).

In the current research, we propose that women and men focus on different types of interpersonally vulnerable behaviors when they think about trust, due to gender differences in socialization and relational norms. Specifically, in their relationships, females, more than males, value and engage in self-disclosure behaviors – sharing personally sensitive information, thoughts, and feelings (Dindia & Allen, 1992; Rose, 2002; Shulman, Laursen, Kalman, & Karpovsky, 1997). As a result, we expect women's experience of interpersonal trust to be more strongly tied to their sense of being able to safely self-disclose.

Furthermore, because women tend to be more sensitive to their counterpart's characteristics as a prerequisite for self-disclosures (Petronio, Martin, & Littlefield, 1984), and because the counterpart's benevolence renders self-disclosures less risky and more rewarding, we predict that women will be more sensitive than men to others' benevolence when forming interpersonal trust judgments. Lastly, we propose

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<https://doi.org/10.1016/j.obhdp.2022.104119>

Received 23 April 2021; Received in revised form 4 January 2022; Accepted 13 January 2022

Available online 3 February 2022

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that these gender differences are linked to differential responses to benevolent others, in terms of relationship quality and well-being at work.

Given the key role of trust for organizational and interpersonal outcomes, explicating gender differences in interpersonal trust is a worthy endeavor. First, our work contributes to the literature on gender differences in trust, which has often relied on anonymous trust games. This literature found a context-sensitive tendency for women to trust less than men (Croson & Gneezy, 2009; Haselhuhn, 2020), but a greater tendency for them to trust after a trust violation (Haselhuhn, Kennedy, Kray, Van Zant, Schweitzer, 2015). Complementing these findings, our research draws on work in developmental and social psychology to propose that gender differences in self-disclosure behaviors may lead to differences in how women and men understand trust. In building a connection between self-disclosure norms and the meaning of interpersonal trust at work, we suggest that previous inconsistent or null effects of gender on trust may benefit from a more nuanced consideration of how interpersonal trust is interpreted by women and men. More broadly, our work highlights the value of taking into account the inherently social nature of organizational life when studying gender differences in trust (c.f. Heath & Sitkin, 2001).

Second, the current research contributes to our understanding of trust development by showing that women's interpersonal trust judgments are more sensitive than men's to others' benevolence. It thus builds on and extends research on the three components of a target's trustworthiness – benevolence, ability, and integrity (Mayer et al., 1995). While prior work has focused on factors that shift the relative importance of the different aspects of trustworthiness, such as relationship type, context, or culture (Knoll & Gill, 2011; SimanTov-Nachlieli, Har-Vardi, & Moran, 2020; Wasti, Tan, & Erdil, 2011), we demonstrate that across multiple types of work relationships, women consistently view trustee benevolence as more important than men do.

Lastly, our findings contribute to the organizational trust literature by offering further evidence for the value of multidimensional trust measures (e.g., Gillespie, 2011; McAllister, 1995). While the vast majority of existing trust measures are unidimensional (McEvily & Tortoriello, 2011), such measures would have concealed the gender differences we uncovered in our research. Thus, a multidimensional view of trust may be more conducive to capturing the complex workings of interpersonal trust in organizations and beyond.

1.1. Dimensions of trust behavior

Trust refers to one party's willingness to engage in behaviors that render them vulnerable to the actions of another, in expectation of positive outcomes (McEvily & Tortoriello, 2011). Research has identified two distinct behavioral dimensions of trust in work relationships: *disclosure-based trust* and *reliance-based trust* (Gillespie, 2011). The disclosure dimension represents individuals' willingness to *share sensitive personal and work-related information, such as genuine thoughts, feelings, or concerns*. The reliance dimension captures individuals' willingness to *depend on another's skills, knowledge, or judgments, for example, by delegating or granting autonomy*.

The current research focuses on the centrality of disclosure-based trust to individuals' understanding of interpersonal trust at work. We contend that disclosure-based trust is more essential to women's understanding of trust than it is to men's, such that women are more likely to think about interpersonal trust in terms of whether they can share sensitive information with a potential trustee. To develop our argument, we next turn to research on gender socialization.

1.2. Gender socialization, relational norms, and interpersonal trust

At its core, interpersonal trust is relational: Trust and relationships evolve concurrently and reinforce one another, such that trust enhances relationship quality, and positive experiences in a relationship enhance

trust (Dirks & Ferrin, 2002; Lewicki & Bunker, 1996; van der Werff & Buckley, 2017; Webber, 2008). One factor that is linked to greater relationship quality is the fulfillment of expectations from the relationship (Hendrick, 1988). Any gender differences in relational expectations should thus have implications for what women and men consider to be a high-quality trusting relationship, and trust should be more likely to develop if counterparts act in accordance with these expectations.

Gender socialization refers to the distinct expectations, behavioral patterns, and values that are transmitted to girls and boys through others, such as parents, teachers, and peers (Lawson, Crouter, & McHale, 2015; Leaper, 2011). Research on gender socialization points to some broad gender differences in relational expectations (norms), which are developed and reinforced by socialization experiences from early and middle childhood (Coltrane, 2006). Peers, in particular, are one of the most important agents of socialization, and are crucial to the development of gendered relational norms (Harris, 1998; Leaper & Friedman, 2007). From a young age, boys and girls tend to interact with same-gender peers, which gives rise to distinct "gender cultures" (Maccoby, 1990). The norms and interaction styles acquired in these gendered peer cultures persist in adulthood (Caspi, 2000; Kesebir, Lee, Qiu, & Pillutla, 2020; Maccoby, 1998).

According to this socialization perspective, gender differences in interpersonal trust may be rooted in the distinct norms and interaction styles of male and female peer cultures. We next draw on prior research on gender differences in self-disclosure norms and behaviors to propose that disclosure-based trust should be a more important feature of interpersonal trust for women than for men.

1.3. Gender differences in self-disclosure norms and behaviors

Gender differences in self-disclosure norms and behaviors are evident in early childhood (Rose, 2002; Shulman et al., 1997). Females engage in and value self-disclosure in their relationships more than males do. One study of adolescent friendships found that girls had higher expectations of self-disclosure than boys, and were more likely to select friends because they felt comfortable confiding freely to them (Richey & Richey, 1980). Young girls also tend to self-disclose more than boys do, and build closeness in their friendships largely through these disclosures (Camarena, Sarigiani, & Petersen, 1990).

Gender differences in self-disclosure are also evident in adulthood (Cross, Bacon, & Morris, 2000; Dindia & Allen, 1992; Gabriel & Gardner, 1999). In close relationships, women are more willing than men to disclose, and they respond to others' self-disclosures in a more positive manner, by expressing care and concern for the disclosing party (Stokes, Fuehrer, & Childs, 1980; Rose & Rudolph, 2006; Rubin & Shenker, 1978). These encouraging reactions are likely to facilitate further disclosures because recipients can count on a supportive response. Altogether, women's relational norms call for, facilitate, and reward self-disclosure.

In contrast, sharing personal thoughts and feelings is less appealing to and less common among males, particularly when it comes to negative self-disclosures (Cross & Madson, 1997). This may be because self-disclosures can signal weakness, thus conflicting with the status and self-presentation concerns prevalent in masculine peer cultures (Leaper & Friedman, 2007; Lever, 1978; Savin-Williams, 1976; 1979). One study attributed the male reluctance to self-disclose partly to perceived competition, which is greater among men (Stokes et al., 1980). This effect may be amplified for those with higher status: Higher-status people who disclose their weaknesses in task-oriented relationships are penalized because they signal vulnerability (Gibson, Harari, & Marr, 2018). Given the gender differences in social status in the workplace and the larger society (Leaper & Friedman, 2007; Ridgeway, 2001), the risks of self-disclosure may, on average, loom larger for men than for women.

Overall, men's relational norms discourage self-disclosure, whereas women view self-disclosure behaviors as an integral part of high-quality relationships. Given these norms, being able to self-disclose rewardingly

and safely, without incurring personal backlash, should be more fundamental to women's understanding of interpersonal trust than to men's. We thus propose that for women, trusting someone is more about feeling able to disclose sensitive thoughts, feelings, or concerns to them.

Hypothesis 1. *Disclosure-based trust is a more essential aspect of interpersonal trust for women than for men.*

1.4. Gender and benevolence sensitivity in trust development

In light of these gender differences in relational norms and the hypothesized significance of disclosure-based trust, we expect women and men to weigh criteria differently when deciding to trust someone. Specifically, we propose that women will be more concerned than men about others' benevolence when forming trust judgements. According to a prominent theory of interpersonal trust in organizations, trust towards a target is largely determined by the target's perceived trustworthiness (Mayer et al., 1995). The three components of perceived trustworthiness are ability, integrity, and benevolence. Benevolence is *the extent to which the trustee is believed to want to do good to the trustor, aside from egocentric motives* (Mayer et al., 1995, p. 718).

We conceptualize *benevolence sensitivity* as the perceived importance and salience of another's benevolence-related traits. For three reasons, we predict that women have higher benevolence sensitivity than men when forming interpersonal trust judgments. First, women may be more sensitive to benevolence because disclosure-based trust is more essential to them, as hypothesized above. Because honest self-disclosures create considerable personal vulnerability, the disclosing party should be highly sensitive to the receiver's benevolence as an indicator of the potential risks and rewards associated with disclosing. Benevolence can facilitate disclosures by increasing the chance of receiving a kind and caring response, thus reducing the risks of humiliation or exploitation that may result from sharing one's feelings or concerns (Gibson et al., 2018; Kelly & McKillop, 1996). Consistent with this reasoning, benevolence is the most important trustworthiness factor predicting disclosure-based trust (Tomlinson, Schnackenberg, Dawley, & Ash, 2020). Because being able to self-disclose is more central to women's conceptualization of interpersonal trust than to men's, we expect women to have higher benevolence sensitivity. In contrast, since men are less likely to think about interpersonal trust in terms of disclosure behaviors, male trustors may have relatively less reason to seek in their potential trustees benevolence-related traits, which safeguard against the risks of self-disclosure.

Second, in addition to facilitating disclosure-based trust, benevolence-related traits may also be more important and salient to women due to gendered norms in how women and men form and maintain relationships (Baumeister, 2010; Buhrmester & Prager, 1995; Cross & Madson, 1997; Gabriel & Gardner, 1999; Savin-Williams, 1980). Females tend to form intimate dyadic relationships, wherein one party's actions greatly impact the other party's outcomes (Aron, Aron, Tudor, & Nelson, 1991). This strong interdependence heightens the importance of the other party's intentions toward oneself, and puts a high premium on benign intentions. In contrast, males often interact in larger groups (Baumeister & Sommer, 1997; Geary, Byrd-Craven, Hoard, Vigil, & Numtee, 2003) where any single peer's benevolence is less consequential and thus less relevant.

Third, men tend to be more competitive than women (Niederle & Vesterlund, 2011; Spence & Helmreich, 1983), and attribute more positive outcomes to competition (Kesebir, Lee, Elliot, & Pillutla, 2019). Whereas men are socialized to value status competition (Beutel & Marini, 1995), women's relationships are more likely to be damaged by competition (Lee, Kesebir, & Pillutla, 2016). Competing in status hierarchies may be incongruous with benevolence, as competition is zero-sum and oriented toward establishing one's superiority over others, while benevolence is about desiring positive outcomes for others.

Based on these three reasons, we expect women to value

benevolence-related traits more than men do in work relationships. Some research already supports this proposition (Golesorkhi, 2006). One study on leader-member exchange found that personal affection and support from the leader was associated with higher job satisfaction in female employees than male employees (Collins, Burrus, & Meyer, 2014). We thus propose:

Hypothesis 2. *Women are more sensitive than men to others' benevolence when forming interpersonal trust judgements.*

1.5. Gender differences in responses to benevolent others

Due to these hypothesized gender differences in disclosure-based trust and benevolence sensitivity, women and men may respond differently to benevolent others. Our first two hypotheses predict that women are more sensitive than men to others' benevolence when developing interpersonal trust, and that such trust manifests itself more as a sense of being able to self-disclose to trustees. Taken together, we thus expect women to feel greater disclosure-based trust towards benevolent others.

Building on prior research demonstrating the positive individual and interpersonal outcomes associated with trust, we predict that because women feel greater disclosure-based trust than men do towards benevolent others, they will also build higher-quality relationships with these trustees and derive greater well-being from such relationships (Fig. 1).

1.5.1. Relationship quality

Trust is fundamental to high-quality relationships (Cheshin, Amit, & Van Kleef, 2018; Ferris et al., 2009; Lewicki & Bunker, 1995). Disclosure-based trust should thus predict a stronger relationship with the trusted party, wherein one feels comfortable seeking help, wants to continue the relationship, and experiences greater relationship satisfaction. In support of this prediction, some studies link relationship quality to disclosure-based behaviors. For instance, being able to share one's genuine emotions, particularly negative ones, is a defining feature of high-quality connections (Dutton & Heaphy, 2003). Moreover, personal disclosures can promote liking and closeness toward others (Collins & Miller, 1994; Worthy, Gary, & Kahn, 1969) and are associated with more satisfying relationships (Vera & Betz, 1992).

In addition, individuals may more readily seek out trusted others in times of need. Since help-seeking often entails a risk to one's image and sense of competence (Lee, 1997, 1999), people are likely to seek help from those they trust. Conversely, people may find it difficult to maintain relationships with those whom they cannot trust and try to disengage from such parties over time. Due to these positive relational implications associated with interpersonal trust, we predict:

Hypothesis 3a. *The indirect relationship between trustee benevolence and relationship quality, mediated by disclosure-based trust, is stronger for female (vs. male) trustors.*

1.5.2. Well-being

Interpersonal trust has also been strongly linked to job satisfaction and well-being (Dirks & Ferrin, 2001). It emerged as a positive predictor of well-being in a study across 83 countries (Poulin & Haase, 2015). In the workplace, trust in co-workers is a strong predictor of life satisfaction (Helliwell & Wang, 2011), and employees who trust their leaders report greater psychological well-being (Kelloway, Turner, Barling, & Loughlin, 2012). Trust in supervisors is also associated with greater job engagement and less emotional exhaustion (Chughtai, Byrne, & Flood, 2015).

These workplace findings may partially be explained by the role of self-disclosure. Employees who are comfortable sharing their personal thoughts and concerns at work may feel more authentic, which is associated with greater well-being (Van den Bosch & Taris, 2014). In contrast, feeling unable to open up about issues or problems may become stifling, and cause people to consider leaving their organizations

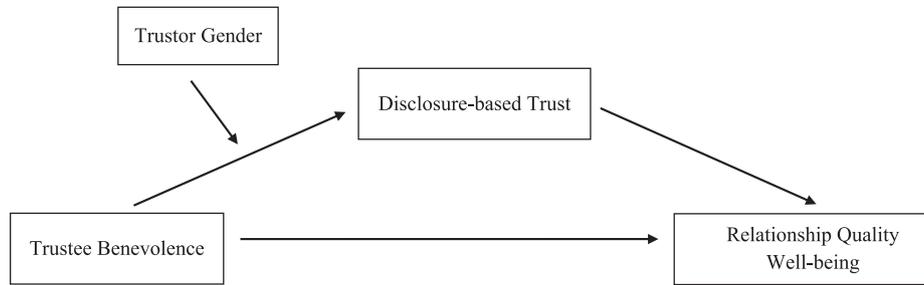


Fig. 1. Moderated mediation model (Hypotheses 3a and 3b).

in search of more fulfilling work environments. On the basis of these findings, we predict:

Hypothesis 3b. *The indirect relationship between trustee benevolence and well-being, mediated by disclosure-based trust, is stronger for female (vs. male) trustors.*

2. Overview of studies

We present four studies to test our hypotheses. Study 1 tests Hypothesis 1 and shows that the relationship between disclosure-based trust and interpersonal trust is stronger for female employees than male employees. Study 2 tests Hypothesis 2 with a vignette design and finds that compared to men, women report benevolence-related traits to be more important when deciding how much to trust a co-worker, regardless of the co-worker’s hierarchical position. Study 3 tests and finds support for Hypotheses 1 and 2 by asking employees about actual co-workers in whom they have high and low trust. Lastly, Study 4 tests Hypotheses 3a and 3b in a diverse graduate student sample by examining their relationships with their supervisors. Data and materials are available at https://osf.io/4zrgk/?view_only=1804f9e66d464a1a8ee3b1298fa39987.

3. Study 1

Study 1 tested our first hypothesis that disclosure-based trust is more central to women’s understanding of trust than men’s. Participants reported their overall trust towards one of their co-workers, as well as their willingness to engage in disclosure-based behaviors and reliance-based behaviors with the co-worker. We predicted that overall trust would be more strongly associated with disclosure-based trust for women than for men.

3.1. Method and design

All study materials were pre-registered (https://aspredicted.org/HQ8_98M).

3.1.1. Participants

A G*Power analysis indicated that 830 participants would be required to detect a small interaction effect size ($f^2 = 0.02$) with 90% power (Faul, Erdfelder, Lang, & Buchner, 2007). We thus aimed to recruit a minimum of 900 participants. The sample consisted of 919 participants recruited from Amazon Mechanical Turk ($M_{age} = 41.1, SD_{age} = 11.4$; 50% female; 78% White, 9% African American, 8% Asian American, 4% Latin American). All participants were employed at the time of the study (7% part-time), and had on average nine years of work experience. Participants received \$1.00 in exchange for completing the study. Following our pre-registered exclusion criteria, 20 participants were dropped from the analyses for missing an attention check question, resulting in a final sample of 899 participants.

3.2. Procedure and measures

Participants were asked to list the first names of three co-workers with whom they frequently interact. We then randomly selected one of these co-workers and asked them to rate their disclosure- and reliance-based trust, friendship¹, and interpersonal trust towards this co-worker. By asking participants to name three co-workers rather than one, we aimed to avoid any potential ceiling effects that may result from participants picking their “best friend” at work, whom they may trust highly.

3.2.1. Disclosure- and reliance-based trust

First, participants rated their disclosure- and reliance-based trust in their co-worker (counterbalanced) by indicating their willingness to engage in disclosure- and reliance-based behaviors (Gillespie, 2011) on a 7-point scale (1 = strongly disagree, 7 = strongly agree). The scale for disclosure-based trust consisted of 5 items such as “Share my personal problems and issues with [co-worker]” (Cronbach’s $\alpha = .92$). The scale for reliance-based trust consisted of 5 items such as “Rely on [co-worker’s] work-related judgments” (Cronbach’s $\alpha = .93$).

3.2.2. Interpersonal trust

Similar to the approach taken by Cao and Galinsky (2020), to create a general measure of interpersonal trust, we developed the following 3 items (Cronbach’s $\alpha = .98$): “How much would you say you trust [co-worker]” (1 = not at all, 7 = a great deal), “[co-worker] is someone whom I feel I can trust” (1 = strongly disagree, 7 = strongly agree), and “please indicate your overall level of trust towards [co-worker]” (1 = extremely low, 7 = extremely high).

3.3. Results

Table 1 presents descriptive statistics and correlations by participant

Table 1 Study 1 - Descriptive statistics and correlations by participant gender.

Variable	M	SD	1	2
<i>Male Participants</i>				
1. Disclosure-based trust	4.78	1.61		
2. Reliance-based trust	5.50	1.29	0.55***	
3. Interpersonal trust	5.46	1.51	0.65***	0.77***
<i>Female Participants</i>				
1. Disclosure-based trust	4.76	1.46		
2. Reliance-based trust	5.59	1.24	0.59***	
3. Interpersonal trust	5.42	1.29	0.72***	0.75***

*** $p < .001$. $n_{female} = 446, n_{male} = 453$.

¹ We included work friendship as a pre-registered exploratory item to test a potential moderation effect. We did not find this effect, and report the results in the SOM.

Table 2
Study 1 – Hierarchical regression analysis predicting interpersonal trust.

Variable	Model 1	Model 2	Model 3
Intercept	2.71 ^{***} (0.16)	2.96 ^{***} (0.34)	0.37 (0.30)
<i>Predictor Variables</i>			
Disclosure-based trust (DT)	0.58 ^{***} (0.03)	0.58 ^{***} (0.03)	0.29 ^{***} (0.03)
Participant gender (F = 1)	-0.52* (0.22)	-0.50* (0.22)	-0.39 (0.24)
DT × participant gender	0.10* (0.04)	0.10* (0.04)	0.11 ^{**} (0.04)
<i>Control Variables</i>			
Co-worker role			
Supervisor		-0.33 (0.32)	0.10 (0.25)
Peer		-0.28 (0.31)	0.29 (0.25)
Subordinate		-0.18 (0.32)	0.44 (0.25)
Reliance-based trust (RT)			0.63 ^{***} (0.04)
RT × participant gender			-0.04 (0.05)
R-squared	0.48	0.48	0.68

Notes. Table presents unstandardized regression coefficients. Standard errors are reported in parentheses. Co-worker role was dummy coded. *N* = 899.

* *p* < .05, ** *p* < .01, *** *p* < .001.

gender. The randomly selected co-worker had the same gender as the participant 71% of the time. The role of the co-worker included peers (67%), supervisors (17%), subordinates (15%), and others (1%).

We conducted a regression analysis to test whether participants' gender moderated the relationship between their disclosure-based trust and overall interpersonal trust toward their co-worker. In a simple model (Model 1 on Table 2), predicting overall trust with only disclosure-based trust, gender, and their interaction, we found that the interaction was significant (*B* = 0.10, *SE* = 0.04, *p* = .019, *CI*₉₅ = 0.02; 0.19). Specifically, the relationship between disclosure-based trust and interpersonal trust was significantly stronger for women (*B* = 0.68, *SE* = 0.03, *p* < 0.001, *CI*₉₅ = 0.62; 0.74) than for men (*B* = 0.58, *SE* = 0.03, *p* < 0.001, *CI*₉₅ = 0.51; 0.64). We next included co-worker role as a dummy-coded covariate (Table 2 Model 2). The interaction effect was robust to the addition of this variable (*B* = 0.10, *SE* = 0.04, *p* = .026, *CI*₉₅ = 0.01; 0.19).

Finally, we added reliance-based trust and its interaction with participant gender to this model (Table 2 Model 3). The reliance-based trust × gender interaction was not significant (*B* = -0.04, *SE* = 0.05, *p* = .424, *CI*₉₅ = -0.14; 0.06), indicating that women and men do not differ in the extent to which they associate interpersonal trust with reliance-based trust. Supporting Hypothesis 1, we found that the disclosure-based trust × participant gender interaction remained positive and significant (*B* = 0.09, *SE* = 0.04, *p* = .009, *CI*₉₅ = 0.02; 0.16), suggesting that our effect is specific to disclosure-based trust. Decomposing this interaction in the full model revealed that disclosure-based trust was a stronger predictor of interpersonal trust for women (*B* = 0.40, *SE* = 0.03, *p* < 0.001, *CI*₉₅ = 0.34; 0.46) than for men (*B* = 0.29, *SE* = 0.03, *p* < .001, *CI*₉₅ = 0.23; 0.34).

3.3.1. Robustness checks

As the majority of participants selected a same-gender peer, we conducted additional robustness checks to examine the potential effect of co-worker gender and co-worker role in order to explore generalizability. We report these results in the SOM for Study 1 as well as all subsequent studies where trustee gender and trustee role were measured or manipulated. These supplementary analyses suggest that neither

Table 3
Study 2 - Means (standard deviations) by participant gender and target type.

Variable (trait importance)	Female			Male		
	Junior employee	Peer	Manager	Junior employee	Peer	Manager
Benevolence	5.30 _a (1.05)	5.68 _b (0.90)	5.68 _b (1.02)	4.74 _c (1.10)	5.23 _d (1.01)	5.34 _d (0.97)
Ability	5.65 _a (1.04)	5.29 _b (1.02)	5.91 _c (0.82)	5.57 _a (1.02)	5.22 _b (1.20)	5.77 _c (0.93)
Integrity	6.11 _a (0.77)	5.83 _b (0.94)	6.31 _c (0.69)	5.78 _d (0.89)	5.60 _e (0.98)	6.06 _f (0.71)

Notes. *n* = 114–176. Within gender or within target type, subscripts across each row indicate means are significantly different at *p* < .05.

trustee gender nor trustee role significantly impacted the results presented throughout the main paper.

In addition, a confirmatory factor analysis indicated that disclosure-based trust, reliance-based trust, and interpersonal trust were conceptually distinct and that this three-factor model was a better fit to the data than a single-factor model. We present the confirmatory factor analyses for Study 1 and all subsequent studies in the SOM. Results indicate that the model in each study was a good fit to the data.

3.4. Discussion

Study 1 offered initial support for Hypothesis 1, according to which women, more than men, consider the ability to engage in disclosure behaviors to be a more integral aspect of interpersonal trust. As expected, women's interpersonal trust towards their colleagues was more strongly associated with disclosure-based trust compared to men's. In contrast, men and women did not differ in how much they associated reliance-based trust with interpersonal trust.

4. Study 2

Study 2 sought to test Hypothesis 2 by examining gender differences in benevolence sensitivity when deciding to trust others at work. We asked participants to consider the importance of benevolence-related traits when deciding how much to trust a co-worker. To test the generalizability of the effect, we manipulated whether the co-worker was a junior employee, a peer, or a manager. We also measured the importance of ability- and integrity-related traits.

4.1. Method and design

Study 2 employed a 2 (participant gender) × 3 (target: junior employee, peer, manager) between-subjects design. The study was pre-registered (https://aspredicted.org/SLP_S7Z).

4.1.1. Participants

A power analysis indicated that 813 participants would be required to detect a small interaction effect size (*d* = 0.25) with 90% power. We recruited 852 U.S. participants (*M*_{age} = 39.8, *SD*_{age} = 13.1; 57% female; 75% White, 11% African American, 7% Asian American, 5% Latin American) online from Amazon Mechanical Turk. At the time of the study, 77% of the participants were employed (21% part-time). Participants received \$0.90 in exchange for completing the study.

4.2. Procedure and measures

Participants were asked to imagine that they were deciding how much to trust a manager, a peer, or a junior employee. They were asked to rate the importance of benevolence-, ability-, and integrity-related traits for making their trust judgments, on a 7-point scale (1 = not so important, 7 = extremely important). We obtained the traits by identifying the nearest and most common synonyms of the three central categories in a thesaurus and randomized the order in which they were presented to participants.

4.2.1. Benevolence

The benevolence-related traits were *helpful, supportive, caring, warm, and kind*. We averaged the ratings to arrive at a single measure (Cronbach's $\alpha = .87$).

4.2.2. Ability

The five ability-related traits were *competent, intelligent, able, skilled, and knowledgeable* (Cronbach's $\alpha = .89$).

4.2.3. Integrity

The five integrity-related traits were *fair, principled, just, ethical, and incorruptible* (Cronbach's $\alpha = .82$).

4.3. Results

Table 3 presents descriptive statistics by gender and target type. We conducted a 2-way ANOVA to examine the effect of participant gender and target type on the importance attributed to each trait category.

4.3.1. Importance of benevolence (Hypothesis 2)

As Hypothesis 2 predicts, there was a main effect of gender, $F(1, 846) = 41.73, p < .001$, such that women rated benevolence-related traits as more important for trusting the targets ($M = 5.54, SD = 1.01, CI_{95} = 5.45; 5.63$) than men did ($M = 5.12, SD = 1.05, CI_{95} = 5.01; 5.23$), $M_{Diff} = 0.43$, Cohen's $d = 0.41$.

There also was a main effect of target type, $F(2, 846) = 19.61, p < .001$, such that benevolence was rated as more important for trusting peers ($M = 5.49, SD = 0.97, CI_{95} = 5.38; 5.60$) and managers ($M = 5.52, SD = 1.01, CI_{95} = 5.40; 5.64$) than junior employees ($M = 5.08, SD = 1.10, CI_{95} = 4.95; 5.21$).

The interaction effect between gender and target type was not significant, $F(2, 846) = 0.90, p = .406$. Thus, we did not find any evidence that the importance of benevolence for women depended on the type of work relationship. Although we cannot fully rule this out on the basis of a null-effect (Aczel et al., 2018), we had high levels of statistical power to detect meaningful effects.

4.3.2. Importance of integrity and ability

We tested the alternative account that women may simply hold higher standards than men do when deciding to trust someone, by checking whether they also rated integrity and ability as more important for trusting a co-worker. There was a main effect of gender on the importance of integrity-related traits, $F(1, 846) = 21.20, p < .001$, such that women rated them as more important ($M = 6.08, SD = 0.83, CI_{95} = 6.00; 6.15$) than men did ($M = 5.83, SD = 0.88, CI_{95} = 5.74; 5.92$), $M_{Diff} = 0.25$, Cohen's $d = 0.29$. There was no gender difference in the importance attributed to ability-related traits, $M_{Diff} = 0.08, F(1, 846) = 2.03, p = .156$. A 2-way ANOVA revealed that the gender \times target interaction was not significant for either integrity-, $F(2, 846) = 0.29, p = .748$ or ability-related traits, $F(2, 846) = 0.10, p = .907$.

We also found a non-hypothesized main effect of target type for both integrity and ability such that they were rated as significantly more important for trusting managers than for trusting junior employees ($p < .018$), and significantly more important for trusting junior employees than for trusting peers ($p < .001$).

4.4. Discussion

Study 2 offers support for Hypothesis 2 by documenting a gender difference in benevolence sensitivity across different types of work relationships. Specifically, women placed more importance on benevolence-related traits than did men when deciding to trust junior employees, peers, and managers. While the absence of a statistically significant gender \times target interaction does not conclusively indicate a

true null-effect (Altman & Bland, 1995), it suggests that the findings are generalizable across various types of relationships in organizations. In addition, our SOM presents the results of additional robustness checks for Studies 1 and 3, where we measured target type, and find that the effects are generalizable across different targets.

Study 2 results also speak to the validity of the alternative account that women simply place more importance on all aspects of target trustworthiness. Contradicting this account, we found no gender difference in the importance of ability-related traits for forming trust judgements. However, women rated integrity-related traits as more important than men did, though the effect was smaller than that for benevolence. This finding is consistent with previous evidence that women have stronger moral attitudes than men, and are less willing to make ethical compromises (Borkowski & Ugras, 1998; Kennedy & Kray, 2014; Kennedy, Kray, & Ku, 2017). If women feel greater aversion towards moral transgressions, they may put more weight on integrity than men do when deciding how much to trust others.

Lastly, we found that trait importance depended on target type. In particular, participants rated all traits as most important for trusting managers. Since managers often have power and influence over employees' work environment, performance evaluations, and career advancement, the relationship between employees and managers contains more asymmetric vulnerability. As a result, employees may place greater importance on all trustworthiness facets when trusting their managers.

While supporting our predictions, Study 2 is limited by its reliance on hypothetical targets, raising concerns around external validity. We address this limitation in Study 3 by examining trust and benevolence in real work relationships.

5. Study 3

Study 3 sought to jointly test Hypotheses 1 and 2 by asking employees to describe and rate co-workers for whom they felt high or low levels of trust. If disclosure-based trust and benevolence matter more for women's trust judgments, as we hypothesize, they should also feature more prominently in participants' trust and distrust judgments. In line with Hypothesis 1, we expected that compared to men, women would report greater [lower] disclosure-based trust in co-workers they highly trusted [co-workers they didn't trust much]. In line with Hypothesis 2, we further expected women to rate and describe their highly trusted [not-much-trusted] co-workers as more [less] benevolent than men do.

5.1. Method and design

Study 3 employed a 2 (participant gender) \times 2 (trust: high vs. low) between-participants design. Participants were asked to identify and describe a co-worker whom they either highly trusted or did not trust much.

5.1.1. Participants

We aimed to recruit a minimum of 100 participants per cell to be able to detect small-to-medium effects with reasonable statistical power. We recruited 509 U.S. participants ($M_{age} = 31, SD_{age} = 8.8$; 57% female; 73% White, 20% Asian American, 6% African American, 6% Latin American) online from Prolific Academic. At the time of the study, all participants were employed (32% part-time). Participants received £1.50 in exchange for completing the study. Participants who failed any of the five attention checks were excluded from the analyses, resulting in 425 responses. A sensitivity power analysis (Faul et al., 2007) revealed that this sample size provided 80% power to detect a gender difference effect size of Cohen's $d = 0.26$ and 90% power to detect a gender difference effect size of Cohen's $d = 0.30$.

5.2. Procedure and measures²

Participants were randomly assigned to either a *high trust* or *low trust* condition. Participants in the high trust condition were asked to identify a co-worker whom they “trust a lot,” while those in the low trust condition were asked to identify a co-worker whom they “don’t trust much.”

After entering the first name of their co-worker, participants were asked to list between 3 and 10 traits that characterize this person. Subsequently, participants rated their co-worker on measures of benevolence, ability, integrity, and general organizational trust adapted from Mayer and Davis (1999) and disclosure- and reliance-based trust adapted from Gillespie (2011) on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*).

5.2.1. Benevolence

We adapted the benevolence measure by inserting the first name of each participant’s co-worker as the target. The 5-item subscale consisted of items such as “[Co-worker] is very concerned about my well-being” (Cronbach’s $\alpha = .96$).

5.2.2. Ability

The 6-item subscale consisted of items such as “[Co-worker] is very capable of performing their job” (Cronbach’s $\alpha = .97$).

5.2.3. Integrity

The subscale consisted of items such as “[Co-worker] tries hard to be fair in their dealings with others.” To improve reliability, we dropped one item, resulting in 5 items (Cronbach’s $\alpha = .94$).

5.2.4. Disclosure- and reliance-based trust

Using the same measure as in Study 1, participants indicated their willingness to engage in disclosure- and reliance-based behaviors towards their co-worker (Gillespie, 2011). A sample item for disclosure-based trust was, “I would be willing to discuss work-related problems or difficulties that could potentially be used against me” (Cronbach’s $\alpha = .96$). A sample item for reliance-based trust was, “I would be willing to rely on [co-worker’s] task-related skills and abilities” (Cronbach’s $\alpha = .96$).

5.2.5. Unidimensional organizational trust

We also asked participants to complete a unidimensional measure of general organizational trust (Mayer & Davis, 1999) to assess the potential value of the multidimensional measure of trust over a unidimensional one (McEvily & Tortoriello, 2011). We removed one item to improve reliability, resulting in three final items, such as “If I had my way, I wouldn’t let [co-worker] have any influence over work issues that are important to me” (Cronbach’s $\alpha = .91$).

5.3. Results

Table 4 reports descriptive statistics by gender and trust condition. Participants selected same-gender co-workers 69% of the time, and the gender of the selected co-worker did not differ across trust conditions ($p = .186$). The co-workers identified by participants included peers (66%), supervisors (24%), subordinates (6%), and others (3%), such as managers from different departments. The role of the selected co-worker did not differ by gender or trust condition ($ps > .164$). For each dependent variable, we conducted a two-way ANOVA to examine the predictive roles of gender and trust condition.

² In order to explore whether disclosure- and reliance- based trust effectively captured participants’ affective and cognitive trust (McAllister, 1995), as has been suggested in prior research (Tomlinson, Schnackenberg, Dawley, & Ash, 2020), we also included the latter measures. We report results pertaining to those measures in the supplemental online material.

Table 4

Study 3 Means (standard deviations) by participant gender and trust condition.

Variable	Female		Male	
	High Trust	Low Trust	High Trust	Low Trust
Benevolence	5.98 _a (0.66)	2.47 _b (1.02)	5.78 _a (0.81)	2.73 _c (1.15)
Ability	6.33 _a (0.57)	3.85 _b (1.63)	6.18 _a (0.70)	3.70 _b (1.36)
Integrity	6.15 _a (0.61)	2.63 _b (1.14)	6.09 _a (0.62)	2.74 _b (1.05)
Disclosure-based trust	5.87 _a (0.98)	2.13 _b (1.01)	5.56 _c (0.98)	2.40 _b (1.15)
Reliance-based trust	6.27 _a (5.78)	2.74 _b (1.28)	6.11 _a (0.73)	2.69 _b (1.17)
Organizational trust	5.93 _a (0.86)	2.32 _b (1.14)	5.86 _a (0.88)	2.40 _b (1.08)

Note. $n = 84$ -134. Within gender or trust condition, means with different subscripts are significantly different at $p < .05$.

5.3.1. Gender difference in disclosure-based trust (Hypothesis 1)

A two-way ANOVA for disclosure-based trust revealed a main effect of trust condition, $F(1, 421) = 1,162.93, p < .001$, such that participants reported greater disclosure-based trust toward co-workers they highly trusted than co-workers they didn’t trust much. There was no main effect of gender ($p = .839$) on disclosure-based trust. Consistent with Hypothesis 1, gender and trust condition significantly interacted in predicting disclosure-based trust, $F(1, 421) = 7.87, p = .005$.

A simple slopes analysis revealed that towards their highly trusted co-workers, women reported greater disclosure-based trust ($M_{female} = 5.87, SD_{female} = 0.98$) than men did ($M_{male} = 5.56, SD_{male} = 0.98$); $M_{Diff} = 0.30, F(1, 421) = 4.71, p = .031, CI_{95} = 0.03; 0.58$, Cohen’s $d = 0.31$. The gender difference in the low trust condition did not reach significance, $F(1, 421) = 3.27, p = .072$, although the direction was consistent with our predictions: Women reported lower disclosure-based trust towards less trusted co-workers ($M_{female} = 2.13, SD_{female} = 1.01$) than did men ($M_{male} = 2.40, SD_{male} = 1.15$); $M_{Diff} = -0.26, CI_{95} = -0.55; 0.02$, Cohen’s $d = -0.24$. Together, these results support Hypothesis 1.

In contrast, an ANOVA for reliance-based trust revealed only a main effect of trust condition, with all participants reporting greater willingness to engage in reliance behaviors towards highly trusted co-workers; $F(1, 421) = 1,302.52, p < .001$. The interaction effect between participant gender and trust condition was not significant, $F(1, 421) = 0.28, p = .600$, suggesting that the gender difference is specific to disclosure-based trust.

The results for the unidimensional measure of organizational trust mirrored those for reliance-based trust: There was a main effect of trust condition, $F(1, 421) = 1297.04, p < .001$, but no significant interaction effect, $F(1, 421) = 0.52, p = .470$.

5.3.2. Benevolence trait ratings (Hypothesis 2)

The ANOVA for benevolence ratings revealed a main effect of trust condition, $F(1, 421) = 1,329.08, p < .001$, such that highly trusted co-workers were rated as more benevolent than co-workers who weren’t trusted much. The main effect of gender was not significant ($p = .659$). Supporting Hypothesis 2, there was also a significant interaction effect of participant gender and trust condition on benevolence ratings; $F(1, 421) = 6.65, p = .010$.

A simple slopes analysis revealed that in the low trust condition, women rated their co-workers as less benevolent ($M_{female} = 2.47, SD_{female} = 1.02$) than did men ($M_{male} = 2.73, SD_{male} = 1.15$); $M_{Diff} = -0.26, F(1, 421) = 4.04, p = .045, CI_{95} = -0.52; 0.01$, Cohen’s $d = -0.24$. In the high trust condition, the gender difference in benevolence ratings did not reach significance, $F(1, 421) = 2.65, p = .104$, although its direction matched our predictions. Specifically, women rated their highly trusted co-workers as more benevolent than did men; $M_{female} = 5.98, SD_{female} = 0.66, M_{male} = 5.78, SD_{male} = 0.81, M_{Diff} = 0.20, CI_{95} = -0.04; 0.45$,

Cohen's $d = 0.27$.

There were also main effects of trust condition on both integrity [$F(1, 421) = 1,548.93, p < .001$] and ability [$F(1, 421) = 479.56, p < .001$], such that people rated trusted co-workers higher on these traits. However, the interaction effect between gender and trust condition was non-significant both for integrity [$F(1, 421) = 1.11, p = .294$], and ability [$F(1, 421) < 0.0001, p = .986$].

5.3.3. Benevolence trait descriptions (Hypothesis 2)

To further test Hypothesis 2 with a different measure, we examined the traits participants used to describe their co-workers. Participants provided these descriptions before rating their co-worker on specific traits. The descriptions thus capture what is salient to the participants about their co-workers, in the absence of any experimental prime or probe. We expected women to use more benevolence-related words to describe their co-workers than would men.

To identify the trait words that capture the presence or absence of benevolence, we looked up in the Oxford Thesaurus (Urdang, 1993) the synonyms of the keywords *benevolent* and *unkind*³. For each keyword, we obtained the corresponding synonyms, as well as words that listed the keyword as a synonym. We further extended this list by including synonyms from "sense groupings" offered by the Oxford Thesaurus.⁴ We excluded listed synonyms that did not adequately capture the general meaning of each key construct, such as *liberal* for benevolence, or *explicit* for integrity. The final list of words denoting the presence of benevolence included 27 words, such as *caring*, *generous*, and *helpful*, and the list of words denoting the absence of benevolence included 38 words, such as *malicious*, *spiteful*, and *unthoughtful*. We followed the same process to create trait lists corresponding to the absence and presence of ability and integrity by using the keywords *able/incompetent* for ability, and *honest/dishonest* for integrity⁵ (see Table 5 for the full set of words in each list).

To measure how frequently women and men used these sets of words in their descriptions, we used the Linguistic Inquiry and Word Count (LIWC) program (Pennebaker, Booth, Boyd, & Francis, 2015). For descriptions of less trusted co-workers, a chi-square test showed that there was a significant association between participant gender and types of traits used, $\chi^2(2) = 6.20, p = .045$ (please see Table 6).

We examined the adjusted standardized residuals to determine the cell(s) that produced the statistically significant difference (Agresti, 2007, p. 38). Both the residuals for unkind ($z = 2.5$) and dishonest ($z = -2.0$) were larger than the critical value (alpha of 0.05, $z \pm 1.96$). Consistent with Hypothesis 2, women used more trait words denoting lack of benevolence than did men (53.5% vs. 37.5%). Women also used fewer traits than men did that denoted a lack of integrity (38.2% vs. 51.0%). Women and men used words denoting incompetence with similar frequency ($z = -0.8, 8.3\%$ vs. 11.5%).

In the high trust condition, we found a marginally significant association between gender and trait use, $\chi^2(2) = 5.63, p = .060$ (please see Table 7). Adjusted standardized residuals indicated that while women tended to use benevolence-related traits more frequently than men did when describing their highly trusted co-workers (52.0% vs. 45.2%), the

³ We selected *unkind* as the keyword for the absence of benevolence because *unbenevolent* was not in the thesaurus.

⁴ The Oxford Thesaurus further categorizes synonyms under each entry into 'sense groupings' that cluster words syntactically and idiomatically. While synonyms within the same sense group are generally substitutable, synonyms in different groups may lack idiomatic congruity. Therefore, when our keyword was listed as a synonym for an entry with multiple sense groups, we also included the synonyms that appeared in the same sense group as the keyword, but not the synonyms from other sense groups. For example, under the entry *generous*, *benevolent* is in the same sense group as *kind* but not *lavish*; therefore, the former is included, but the latter is not.

⁵ We selected *honest* as an idiomatic adjective for integrity. We selected *incompetent* rather than *unable* as the keyword denoting the absence of ability, because the latter indicated powerlessness rather than a lack of skill.

Table 5

Study 3 - Lists of synonyms by keyword.

Benevolent ($n = 27$)
beneficial, benevolent, benign*, caring, charitable, compassionate, considerate, friendly, generous, gentle, good*, gracious, helpful, humane, humanitarian, kind*, liberal, magnanimous, nice, open-handed, salutary, solicitous, sympathetic, thoughtful, warm*, well-disposed, well-wishing
Able ($n = 33$)
able, accomplished, adept, bright, capable, clever, competent, creative, discerning, effective, efficacious, efficient, experienced, expert, gifted, imaginative, ingenious, intelligent, knowledgeable, master*, prepared, productive, proficient, qualified, quick-witted, resourceful, sharp-witted, skill*, smart, superior, talented, trained, useful
Honest ($n = 30$)
credible, decent, dependable, equitable, ethical, fair, genuine, high-minded, honest*, honorable, impartial, incorruptible, integrity, just, law-abiding, moral, principled, proper, reliable, reputable, righteous*, straightforward, trust*, truth*, unbiased, uncorrupt*, unprejudiced, upright, veracious, virtu*
Unkind ($n = 38$)
abusive, acrimonious, apathetic, bitter, brutal, callous, cold, cruel, cutting, disagreeable, discourteous, draconian, hard*, harsh, heartless, hurtful, inconsiderate, indifferent, insensitive, malicious, mean, merciless, nasty, rude, ruthless, scathing, spiteful, thoughtless, uncaring, uncharitable, uncompassionate, unconcerned, unfeeling, unfriendly, unkind, unpleasant, unsympathetic, unthoughtful
Incompetent ($n = 30$)
amateur*, awkward, bungling, clumsy, crude, deficient, floundering, gauche, helpless, hopeless, inadequate, incapable, incompetent, ineffect*, inefficient, inept, inexper*, inferior, insufficient, maladroit, sloppy, unfit, unpracticed, unproductive, unproficient, unqualified, unskill*, untalented, untrained, useless
Dishonest ($n = 38$)
cheat*, corrupt, counterfeit, crooked, deceitful, deceiving, deceptive, dishonest, dishonorable, disingenuous, disloyal, double-dealing, duplicitous, fake, fraud*, furtive, hypocritical, illegal, immoral, insincere, lying, mendacious, misleading, perfidious, phoney, scheming, sneaky, thief*, treacherous, two-faced, underhand*, unfair, unjust, unprincipled, unscrupulous, untrust*, untruthful, venal

Table 6

Study 3 - Frequency of traits describing less trusted co-workers by participant gender.

	Female (% of all traits used by women)	Male (% of all traits used by men)
Unkind	53.5% (2.5)	37.5% (-2.5)
Incompetent	8.3% (-0.8)	11.5% (0.8)
Dishonest	38.2% (-2.0)	51.0% (2.0)

Note. Adjusted standardized residuals are presented in parentheses.

Table 7

Study 3 - Frequency of traits describing highly trusted co-workers by participant gender.

	Female (% of all traits used by women)	Male (% of all traits used by men)
Benevolence	52.0% (1.9)	45.2% (-1.9)
Ability	18.6% (-2.1)	24.9% (2.1)
Integrity	29.3% (0.2)	29.9% (-0.2)

Note. Adjusted standardized residuals are presented in parentheses.

residual did not reach the critical value of 1.96 ($z = 1.90$). Women used fewer ability-related traits than men ($z = -2.1, 18.6\%$ vs. 24.9%) but women and men used integrity-related traits approximately at the same frequency ($z = -0.2, 29.3\%$ vs. 29.9%).

5.4. Discussion

Study 3 provided additional support for our prediction that disclosure-based trust is a more essential aspect of interpersonal trust for women than for men (Hypothesis 1). Consistent with this prediction, we found a significant cross-over interaction effect, such that women (vs. men) reported greater disclosure-based trust in their highly trusted co-

workers, and marginally lower disclosure-based trust in co-workers they didn't trust much. In contrast, women and men did not differ in their reliance-based trust towards either type of co-worker. This finding speaks against the possibility that women feel overall more extreme levels of trust than men do.

Furthermore, we failed to detect a gender difference using the unidimensional measure of organizational trust (Mayer & Davis, 1999). This affirms the value of a multifaceted trust conceptualization over the unidimensional one, which has typically been used in the trust literature (McEvily & Tortoriello, 2011). In particular, because a willingness to be vulnerable can manifest itself in different ways, a multidimensional view may be more suited to uncovering individual differences in interpersonal trust.

This distinction is important because not only is trust a highly desirable relationship quality in and of itself, but it also is associated with various positive organizational outcomes (Dirks & Ferrin, 2001). Recognizing that trust operates differently for women and men thus opens up the path to a better understanding of the gendered workings of organizational outcomes linked to trust. We explore these gender-differentiated dynamics of trust in our final study, which links the gender difference in benevolence sensitivity and disclosure-based trust to important individual and relational outcomes at work.

Study 3 also offered support for Hypothesis 2, which states that women's trust judgements are more sensitive to benevolence than men's. Consistent with this prediction, we found a significant cross-over interaction between gender and trust condition, such that in the low trust condition, women rated co-workers as significantly less benevolent than men did. In comparison, we found no interaction effects for co-workers' ability or integrity ratings, which further weakens the alternative possibility that women have greater overall trust requirements than do men. The traits participants used to characterize their co-workers corroborated this finding: Compared to men, women used more benevolence-related traits to describe their co-workers, although the effect for highly trusted co-workers did not reach statistical significance.

6. Study 4

In Study 4, we explored gender differences in how individuals respond to benevolent others, in the context of PhD students' relationships with their advisors. Using a diverse sample, we tested Hypotheses 3a and 3b, which state that women feel greater disclosure-based trust towards benevolent parties than men do, which is subsequently associated with higher quality relationships with the trusted party, as well as greater well-being (Fig. 1).

6.1. Method and design

In Study 4, PhD students rated their advisor's benevolence and reported their own levels of disclosure- and reliance-based trust towards their advisor. They also reported their frequency and comfort with seeking help from their advisor, satisfaction with their relationship with their advisor, and overall graduate school satisfaction and turnover intentions.

To assemble our participant pool, we collected publicly listed emails of graduate students in the fifteen most popular graduate degree fields (Carnevale, Cheah, & Hansen, 2015) from the top 50 U.S. universities according to U.S. World & News rankings ("The Best National Universities in America," 2020)⁶. We collected 33,110 email addresses, to which we sent an invitation to participate in a research study on graduate student experiences. We offered participants the chance to win an

Amazon gift card worth \$25 by participating. A few days later, we sent a follow-up email to those who had not completed the survey and had not opted-out of further communication.

6.1.1. Participants

In total, we received 3,914 responses (11.8% response rate). Some of these respondents were recent graduates, students in terminal master's programs, or students without a PhD advisor. We eliminated these participants from our final pool, resulting in 2,551 eligible responses (53% female; 59% White, 25% Asian, 9% Latin American, 4% African American, 3% Middle Eastern). 33.3% of participants were international students, of which 98% reported being at least moderately fluent in English. Participants varied across year in the PhD program (4% first year, 17% second year, 20% third year, 20% fourth year, 20% fifth year, and 19% sixth year or higher), and across academic fields (see Table 8 for a breakdown). Approximately 58% of participants had an advisor of the same gender, and advisors included assistant (12%), associate (22%), and full professors (65%).

6.2. Measures⁷

6.2.1. Benevolence

We used the same measure of benevolence (Mayer & Davis, 1999) as in Study 3, with the target changed to "my advisor" (Cronbach's $\alpha = .92$). Participants rated their advisor's benevolence on a 7-point scale (1 = strongly disagree, 7 = strongly agree).

6.2.2. Ability

Participants rated their advisor's ability (Mayer & Davis, 1999) on the same 7-point scale as above, using the Mayer and Davis (1999) measure (Cronbach's $\alpha = .91$).

6.2.3. Disclosure- and reliance-based trust

Participants reported their disclosure-based trust (Cronbach's $\alpha = .88$) and reliance-based trust (Cronbach's $\alpha = .87$) towards their advisors on a 7-point scale (1 = extremely unwilling, 7 = extremely willing; Gillespie, 2011).

6.2.4. Relationship quality

We used the following measures to capture the quality of participants' relationships with their advisors: help-seeking (Mueller and Kamdar, 2011), relationship satisfaction (Ragins & Cotton, 1999), and desire to change advisors (reverse scored). A sample item from each

Table 8
Study 4 - Frequency of PhD departments.

Biology	6.9%
Chemistry	6.2%
Communications	2.3%
Computer Science	8.5%
Economics	10.3%
Education	2.3%
Engineering	5.2%
English	5.3%
History	6.3%
Mathematics	5.5%
Philosophy	3.3%
Political Science	12.5%
Psychology	14.5%
Social Work	1.4%
Sociology	9.5%

⁶ We excluded professional degree fields, such as law and medicine, because students in such programs typically do not have a focal academic advisor who supervises them throughout the program.

⁷ The data for Study 4 was part of a larger data collection endeavor, which included measures for other in-progress work. Here, we only report the measures relevant to our hypotheses.

measure respectively is, “I often seek assistance from my advisor when I don’t understand how to solve a problem”, “I am very satisfied with the relationship my advisor and I have developed”, and “to what extent would you prefer to have a different advisor?” There were 11 items in total, each measured on a 7-point scale.

Since the three measures were highly correlated (all $r_s > .58$) and there was reasonable agreement among the items, we averaged them to create a composite relationship quality scale (Cronbach’s $\alpha = .96$).

6.2.5. Well-being

We captured students’ well-being using two measures which we adapted to the graduate school context: job satisfaction (Judge, Bono, & Locke 2000) and turnover intentions (Luchak & Gellatly, 2007). A sample item from each scale is, “I feel fairly satisfied with my current experience in graduate school” and “over the past year, how frequently have you thought about quitting the PhD program?” As the two scales were highly correlated ($r = .59$) and showed reasonable inter-item agreement, we created a composite measure of well-being consisting of 8 items (Cronbach’s $\alpha = .90$).

6.2.6. Covariates

Lastly, we collected the following participant information to be used as controls: institution, academic field, year in PhD, advisor gender, and advisor academic rank.

6.3. Results

We excluded from analyses participants who declined to indicate their gender ($N = 47$) and who failed any one of the three attention checks ($N = 411$), resulting in a final sample of 2,093 participants. Table 9 presents the descriptive statistics and correlations for this sample.

We tested the conditional indirect relationship between advisor benevolence and relationship quality and well-being via disclosure-based trust (Hypothesis 3a & 3b) using the PROCESS macro Model 7 in SPSS (Hayes, 2013). We calculated a 95% CI with 10,000 bootstrapped samples while controlling for advisor ability and its interaction with participant gender (Preacher, Rucker, & Hayes, 2007).⁸

6.3.1. Indirect effect of benevolence on relationship quality (Hypothesis 3a)

As shown in Table 10, student gender moderated the relationship between advisor benevolence and disclosure-based trust ($B = 0.09$, $SE = 0.04$, $p = .028$, $CI_{95} = 0.01$; 0.17). This shows that female students had greater disclosure-based trust in benevolent advisors than did male students. After controlling for advisor benevolence, disclosure-based trust positively predicted relationship quality ($B = 0.18$, $SE = 0.01$, $p < .001$, $CI_{95} = 0.15$; 0.20).

The bootstrapped 95% CI for the index of moderated mediation for relationship quality excluded 0 (CI: [0.001, 0.03], $index = 0.02$, $SE = 0.01$), suggesting a significant gender difference in the indirect relationship between advisor benevolence and relationship quality, via disclosure-based trust. As predicted, this indirect relationship was stronger for female (vs.) male PhD students, providing support for Hypothesis 3a (please see Table 10). Specifically, advisor benevolence predicted greater disclosure-based trust among female PhD students than male PhD students (Fig. 2), which in turn, was associated with higher advisor relationship quality.

6.3.2. Indirect effect of benevolence on well-being (Hypothesis 3b)

A moderated mediation analysis revealed that effects for well-being were similar to those for relationship quality (please see Table 10). After

⁸ The results were not meaningfully affected by including institution, department, year in PhD, advisor rank and advisor gender as covariates in the moderated mediation analyses. We report results without the covariates.

controlling for advisor benevolence, disclosure-based trust was positively associated with well-being ($B = 0.14$, $SE = 0.02$, $p < .001$, $CI_{95} = 0.10$; 0.18). The bootstrapped 95% CI for the index of moderated mediation excluded 0 (CI: [0.001, 0.03], $index = 0.01$, $SE = 0.01$), indicating a significant gender difference in the conditional indirect relationship between advisor benevolence and student well-being.

Consistent with Hypothesis 3b, the indirect relationship was stronger for women than men (please see Table 10), suggesting that advisor benevolence (via disclosure-based trust) had a stronger association with women’s well-being in graduate school than men’s (Fig. 2).

6.3.3. Supplemental analyses

As a robustness check, we conducted supplemental analyses with reliance-based trust as a mediator. We did not find any significant moderated mediation via reliance-based trust, suggesting that advisor benevolence (via reliance-based trust) did not differentially predict women’s and men’s well-being or relationship quality.

In addition, we re-ran our analyses separately for each of the relationship quality and well-being measures, and find that the results are consistent with those for the two composite measures. We report these results in the SOM.

6.3.4. Discussion

Study 4 provided support for Hypotheses 3a and 3b. We found that advisor benevolence predicted disclosure-based trust, which in turn predicted students’ help-seeking, relationship satisfaction and desire to change advisors, and all these mediated relationships were stronger for female students. Similarly, advisor benevolence, via disclosure-based trust, was associated with higher graduate school satisfaction and less frequent turnover intentions for women than for men.

Together, these findings support the idea that women and men may respond differently to benevolent others due to gender differences in benevolence sensitivity and disclosure-based trust. In addition, the results further underline the value of a multidimensional measure of trust by highlighting how gender differences in disclosure-based trust (but not reliance-based trust) can be uniquely associated with divergent outcomes.

The correlational design of this study limits our ability to infer causality in these direct effects. In addition, the reciprocal, mutually reinforcing relationship among these constructs raise the possibility of reverse mediation, particularly as relationships strengthen over time. For example, receiving a caring and benevolent response after disclosing sensitive information may reinforce perceptions that the trustee is highly benevolent, and facilitate greater willingness to self-disclose. As the relationship quality improves through these positive interactions, people may similarly perceive their trustees as increasingly trustworthy.

7. General discussion

Interpersonal trust is vital for satisfactory work relationships, effective organizational functioning, and employee well-being (Colquitt et al., 2007; Dirks & Ferrin, 2001; Dirks & Skarlicki, 2009; Ferris et al., 2009). Across four studies, we examined gender differences in interpersonal trust. In support of Hypothesis 1, we showed that feeling comfortable to self-disclose is more strongly associated with interpersonal trust for women than for men (Study 1). Furthermore, when asked to pick someone they trusted, women were more likely than men to pick someone to whom they would feel comfortable self-disclosing (Study 3).

In support of Hypothesis 2, we found that women are more sensitive than men to others’ benevolence when forming trust judgements across various types of work relationships. Specifically, women considered benevolence to be more important when it comes to trusting junior employees, peers, and managers (Study 2). Further supporting Hypothesis 2, women used more traits denoting the absence of benevolence to describe co-workers whom they did not trust much, and rated them as less benevolent, suggesting that a lack of benevolence undermines

Table 9
Study 4 - Descriptive statistics and correlations by participant gender.

Variable	M	SD	1	2	3	4	5
<i>Female</i>							
1. Advisor benevolence	5.60	1.33					
2. Advisor ability	6.18	0.95	0.60***				
3. Disclosure-based trust	4.69	1.55	0.65***	0.34***			
4. Reliance-based trust	5.96	1.11	0.68***	0.68***	0.49***		
5. Relationship quality	5.33	1.44	0.82***	0.68***	0.61***	0.72***	
6. Well-being	4.92	1.29	0.39***	0.35***	0.33***	0.36***	0.47***
<i>Male</i>							
1. Advisor benevolence	5.60	1.28					
2. Advisor ability	6.14	0.97	0.63***				
3. Disclosure-based trust	4.65	1.50	0.56***	0.34***			
4. Reliance-based trust	5.89	1.11	0.65***	0.67***	0.47***		
5. Relationship quality	5.33	1.38	0.79***	0.66***	0.59***	0.70***	
6. Well-being	5.10	1.32	0.44***	0.36***	0.37***	0.36***	0.54***

*** $p < .001$. $n_{\text{female}} = 1108$, $n_{\text{male}} = 985$.

Table 10
Study 4 - Moderated mediation analysis with disclosure-based trust as mediator.

	B (SE)	ab (SE)	95% CI	R ²
<i>Disclosure-based trust</i>				
Advisor benevolence	0.68 (0.04)		0.59, 0.74	0.37***
Advisor ability	-0.02 (0.05)		-0.12, 0.08	
Student gender (F = 1)	-0.15 (0.35)		-0.82, 0.53	
Benevolence × gender	0.13 (0.05)		0.03, 0.23	
Ability × gender	-0.09 (0.07)		-0.23, 0.05	
<i>Relationship quality</i>				
Advisor benevolence	0.57 (0.02)		0.53, 0.60	0.73***
Advisor ability	0.42 (0.02)		0.37, 0.46	
Disclosure-based trust	0.18 (0.01)		0.15, 0.20	
Index of moderated mediation	0.02 (0.01)		0.004, 0.04	
Indirect effect: women		0.14 (0.01)	0.11, 0.17	
Indirect effect: men		0.12 (0.01)	0.09, 0.14	
<i>Well-being</i>				
Advisor benevolence	0.21 (0.03)		0.15, 0.27	0.21***
Advisor ability	0.25 (0.03)		0.19, 0.32	
Disclosure-based trust	0.14 (0.02)		0.10, 0.18	
Index of moderated mediation	0.02 (0.01)		0.003, 0.04	
Indirect effect: women		0.11 (0.02)	0.07, 0.15	
Indirect effect: men		0.09 (0.02)	0.06, 0.13	

Notes. $N = 2093$. Coefficients are unstandardized regression coefficients, based on 10,000 bootstrapped samples. *** $p < .001$.

interpersonal trust more for women than for men (Study 3).

Lastly, Study 4 found that the indirect relationships between trustee benevolence and relationship quality (Hypothesis 3a) and trustor well-being (Hypothesis 3b), mediated by disclosure-based trust, were stronger for women than for men. Specifically, for female PhD students, more

than for male PhD students, advisor benevolence was indirectly associated with greater help-seeking, relationship satisfaction, and graduate school satisfaction, as well as lower desire to change advisors and intentions to quit the PhD program.

7.1. Theoretical and practical implications

This research offers several theoretical and practical contributions. First, we develop a linkage between the literatures on gendered socialization patterns and interpersonal trust at work. We theorize and find evidence that the gendered relational norms evident in early peer socialization experiences may have a bearing on trust in organizational relationships. Our research thus suggests a previously underdeveloped connection between organizational trust and socialization theory.

This research also contributes to existing work on gender differences in trust, which has largely relied on the trust game paradigm. This literature has found that men engage in slightly more trusting behaviors than women by sending more money to their partners in a trust game (Buchan, Croson, & Solnick, 2008; Croson & Gneezy, 2009; van den Akker, van Assen, van Vugt, & Wicherts, 2020). At the same time, women are more trusting than men after trust violations (Haselhuhn et al., 2015). Our results suggest that a more nuanced pattern of gender differences emerges if we consider the relational nature of trust and the various interpersonal ways in which it can be manifested in work relationships.

Specifically, we find that women are more likely than men to interpret trust as a willingness to engage in disclosure-based behaviors, which suggests that the prevailing unidimensional operationalization of trust may not be adequate to capture important gender differences in interpersonal trust. Our work thus highlights the value of considering the multifaceted nature of trust in organizational relationships (Alexopoulos & Buckley, 2013; Lewicki et al., 2006; McEvily & Tortoriello, 2011; van der Werff & Buckley, 2017). As reported in the SOM, we additionally find that our effects are not affected by trustee gender or trustee role, thus offering preliminary support that the documented gender differences in disclosure-based trust and benevolence sensitivity

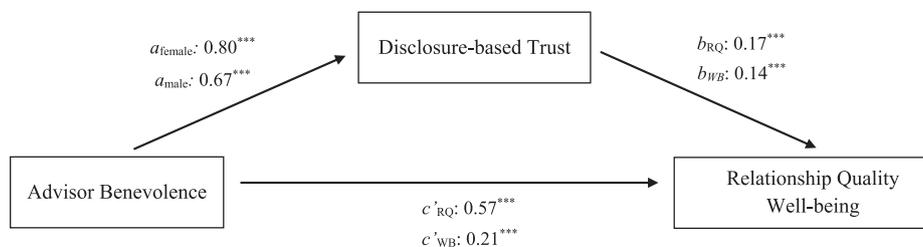


Fig. 2. Moderated mediation pathways (Study 3).

may be generalizable across different types of trustees.

While we used the disclosure- and reliance-based trust paradigm in light of our theoretical grounding in gender differences in self-disclosure, another widely used two-dimensional conceptualization of trust is the affective and cognitive trust dichotomy (McAllister, 1995). Research has suggested a considerable overlap between disclosure-based trust and affective trust, and between reliance-based trust and cognitive trust, such that each pair may be capturing the same underlying concept (Tomlinson et al., 2020). Our supplemental analyses from Study 3 show that the results for disclosure- and reliance-based trust mirror those for affective and cognitive trust, respectively. This is consistent with research suggesting that disclosure- and reliance-based trust are, in fact, appropriate scales to measure affective and cognitive trust (Tomlinson et al., 2020).

Our work also contributes to research on the antecedents of trust formation. We demonstrate that women consistently place greater importance on others' benevolence than men do when making interpersonal trust judgments. Notably, we find that women's benevolence sensitivity is not limited to specific relationship targets, but may be generalizable across peer and hierarchical relationships. Overall, these results demonstrate the benefit of understanding when different antecedents may be more strongly invoked in the process of trust formation (Kim, Dirks, Cooper, & Ferrin, 2006; Kim, Ferrin, Cooper, & Dirks, 2004).

Practically, our research suggests that women and men may make different decisions about whom they trust and engage with at work. Though our data cannot speak to the long-term consequences of such decisions, we may speculate how they can influence women's and men's networks and career trajectories. For instance, because women have stronger requirements for benevolence in order to trust their colleagues, they may risk losing out on certain opportunities and resources by choosing not to engage with or seek help from individuals whom they do not perceive as sufficiently benevolent.

Furthermore, women's greater emphasis on disclosure-based trust could mean that certain organizational cultures are better suited to facilitating trust in women. For instance, women may find it easier to develop trust in work environments that promote openness and self-disclosure, and they may be disadvantaged in settings where such behaviors are frowned upon, as these settings may interfere with their trust building. Relatedly, one study of manager-employee dyads found that female subordinates reported lower opportunities than male subordinates to engage in self-disclosure with their supervisors, even though such communications were positively related to job satisfaction (Callan, 1993). In addition, differences in how women and men construe interpersonal trust raise the possibility that misperceptions and conflicts may arise in work relationships where two parties do not have a shared understanding of what trusting someone means and how it is established (Byron & Landis, 2020). Recent work suggests that employees perceive their supervisors as fairer if there is a match between how much they want to be trusted and how much trust they receive (Baer, Frank, Matta, Luciano, & Wellman, 2021). Our research suggests that workers may also develop more positive relationships with their supervisors, if the type of trust they value matches the type of trust they experience toward their supervisor. Altogether, these gender differences in trust and benevolence sensitivity may foster gender differences in employees' networks, work relationships, and career development.

7.2. Limitations and directions for future research

The present research can be extended, and its limitations addressed, in several ways. We collected our data from single source studies, raising some concerns around common method variance. Even though our analyses involved interaction effects, which are unlikely to be artifacts of common method variance (Evans, 1985; Siemsen, Roth, & Oliveira, 2010), we nevertheless aimed to minimize this concern in several ways. First, we tested our hypotheses through both correlational and

experimental studies. In addition, we followed the recommended procedural safeguards against common method variance in our study designs. These included warning participants that they may not receive payment if their response indicated inattention, randomizing scale and item order, and including reverse-scored items where it was consistent with the original scales (Podsakoff, MacKenzie, & Podsakoff, 2012). Study 4 also included other unreported measures, including an open-ended question, thus creating psychological separation between our variables of interest (Podsakoff et al., 2012). Lastly, confirmatory factor analyses (reported in SOM) indicate that our theoretical models were a good fit to the data across all our studies.

Future research may examine the boundary conditions of women's higher benevolence sensitivity. One potential moderator could be the magnitude of the trustor's dependence on the trustee. The gender difference may diminish in situations where the trustee's benevolent intentions are less relevant for the trustor's outcomes, such as when parties are constrained by contracts or other external guarantees. Conversely, when the need for trust is high, such as in hierarchical relationships with large power and status asymmetries, the need for benevolence may be greater, and the gender difference may be amplified. Since PhD students are often strongly dependent on their supervisors for research funding, co-authorships, and academic guidance, the graduate school context may not be a conservative setting to test the consequences of target benevolence, and future research may examine whether the effect attenuates in other contexts.

Future studies may also examine whether the indirect effects for relationship quality and well-being emerge outside the PhD context. For example, organizational research has shown that a key predictor of employee turnover is perceived supervisor support – employees' perception that supervisors care about their well-being and value their contributions (Eisenberger et al., 2002). Similarly, high-quality leader-follower relationships are positively associated with job satisfaction (Dulebohn et al., 2012). We leave it to future research to examine whether gender differences in disclosure-based trust and benevolence sensitivity may predict relationship quality and well-being in these relationships, too.

There may also be circumstantial or contextual factors under which our observed gender differences are mitigated. For example, if an employee is facing a personal crisis that might affect their ability to perform their job, men and women may similarly wish to confide their circumstances to benevolent supervisors. Furthermore, in certain contexts, such as patient-therapist relationships, the association between interpersonal trust and being able to self-disclose may be equally strong for men and women, because the context itself calls for self-disclosures in a way that wouldn't necessarily apply to men's other relationships. The gender difference in benevolence sensitivity may also be attenuated in competitive contexts, as zero-sum interests and lack of cooperation would render interpersonal trust less relevant to the relationship.

In addition to gender differences we observed in benevolence sensitivity, we also found a non-hypothesized gender difference in the importance of integrity in Study 2, though this appeared to be smaller and less consistent than the gender difference in benevolence sensitivity. Our theoretical grounding in gender differences in self-disclosure norms does not speak to the possibility of gender differences in sensitivity to trustee integrity or ability. Nevertheless, we had measured integrity and ability to rule out the possibility that women are simply more sensitive to all traits, which would suggest a general gender difference in interpersonal trust demands. We were able to eliminate this possibility as the gender difference consistently emerged only for benevolence.

Previous research has identified situational and cultural factors associated with the prominence of different aspects of trustworthiness. Situationally, individuals have a higher preference for competence over social warmth when faced with interdependent economic rewards (Belmi & Pfeffer, 2018). Culturally, members of more individualistic cultures rely more on ability- and integrity-related cues, whereas members of more collectivistic cultures rely more on others'

benevolence (Branzei, Vertinsky, & Camp II, 2007). The current studies extend this research by identifying gender as another factor predicting the relative importance of a trustworthiness dimension. While we focused on the gender difference on the importance of benevolence, future research may explore gender differences in the relative priority of integrity and ability, across contexts.

We found that the ability to self-disclose is more central to women's view of interpersonal trust than for men's. However, our measure of disclosure-based trust (Gillespie, 2011) does not distinguish between the topics on which individuals self-disclose, and combines sensitive work-related and personal information. As past research has suggested that women and men tend to disclose about different topics (Hill & Skull, 1987), another avenue for future research could be investigating how the domain of the disclosure is associated with trust development for women and men.

8. Conclusion

This research examined gender differences in interpersonal trust through the lens of gender socialization. We presented four studies that suggest differences in the role of others' benevolence when women and men form interpersonal trust judgments. In addition, we showed that for women (vs. men), interpersonal trust means being willing to engage in more disclosure-based behaviors. Our work highlights important gender differences in the interpretation and experience of interpersonal trust in workplace relationships. Given the foundational nature of trust for relationships and organizational functioning, it is important to continue to explore the gendered dynamics of interpersonal trust. We hope our work will stimulate more research in this topic.

CRedit authorship contribution statement

Judy Qiu: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Supervision, Writing – original draft. **Selin Kesebir:** Conceptualization, Investigation, Methodology, Supervision, Writing – review & editing. **Gül Günaydin:** Conceptualization, Methodology, Writing – review & editing. **Emre Selçuk:** Conceptualization, Methodology, Writing – review & editing. **S. Arzu Wasti:** Conceptualization, Methodology, Writing – review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.obhdp.2022.104119>.

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