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Retaining Women in Male-Dominated Occupations across Cultures: The Role of Supervisor Support and Psychological Safety

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Abstract

Despite the efforts to increase female representation in male-dominated occupations, many organizations are still challenged by a female talent shortage and high turnover in such jobs (Catalyst, 2014). We look at perceived supervisor support (PSS) as one factor that may reduce turnover intentions of female employees in male-dominated occupations via enhanced perceptions of psychological safety. Further, we integrate social exchange and social identity theories, with research on cross-cultural management, to develop and test a moderated mediation model in which the relationship between PSS and employee turnover intentions via psychological safety is conditional on employee gender and national levels of gender equality, utilizing a sample of 5,578 R&D employees across 24 countries. Our findings have theoretical and practical implications for retaining female employees in male-dominated occupations across the globe.

Keywords: international HRM; gender equality; turnover intentions; male-dominated careers

Retaining Women in Male-Dominated Occupations across Cultures: The Role of Supervisor Support and Psychological Safety

Despite efforts to increase female representation in male-dominated occupations, many organizations are still challenged by a female talent shortage and high turnover of women in male-dominated jobs (Catalyst, 2014, 2021). An internal memo that was made public in 2017, written by a Google software engineer, made this topic even more prominent (Devlin & Hern, 2017). The memo implied that women are under-represented in male-dominated fields like software engineering because they are biologically ill-equipped for such work. The fallout from the memo—which led to the firing of the employee who wrote it—has led to a renewed interest from organizations to learn how they can improve women's representation in male-dominated roles. Additionally, given that women tend to leave jobs in science and tech-intensive industries at higher rates than men (53% for women, compared to 31% for men, among 5,916 MBA graduates surveyed between 2007 and 2014; Beninger, 2014), understanding how to retain female employees in male-dominated occupations has become a key issue in the business and management literature as well in the media (Danbold & Bendersky, 2020; Wallace & DeVita, 2018).

Poor supervisory relationships, as well as lack of perceived fairness and voice, are the most frequently cited reasons that drive women in science and technology to leave their organizations (Catalyst, 2008; Fouad et al., 2017). As such, in the current study, we look at perceived supervisor support (PSS) as one factor that may reduce turnover intentions of female employees in male-dominated occupations via enhanced perceptions of psychological safety. Psychological safety—the belief that one can express oneself without risk of negative consequences (Edmondson, 1999; Kahn, 1990)—is important particularly for female employees

in male-dominated occupations. Indeed, women in male-dominated roles often experience identity threat because they are numerically under-represented and face negative stereotypes due to being in a male-typed position (Good et al., 2012; Moss-Racusin et al., 2012; Murphy et al., 2007). Such environments impede women's perceived ability to express themselves without risk of negative consequences (Kanter, 1977; Van Veelen et al., 2019). For these reasons, we argue that supervisor support and psychological safety are important for retaining women in male-dominated roles. We also propose that PSS may be especially important for the psychological safety of female employees working in countries of lower gender equality (GE) where women may be seen as tokens.

Despite the disparate levels of gender equality across national cultures (House et al., 2004), there has been little attention given to the effects of national context on retaining women in male-dominated careers. As such, we answer a call from international human resource management scholars to better understand how national culture may affect men and women's work behaviors and attitudes related to turnover intentions (MacDonald et al., 2013). Thus, in the current study, we bring together two social theories—that is, social exchange (Blau, 1964) and social identity threat (Abrams & Hogg, 1999; Murphy et al., 2007; Tajfel & Turner, 1986) theories, with research on cross-cultural management (House et al., 2004) to understand the degree to which PSS relates to employee turnover intentions via psychological safety depending on aspects of the context, including one's gender and the GE of one's country. In doing so, we aim to make several contributions to theory, research, and practice.

First, we answer a call in the literature to better understand why PSS relates to employee turnover intentions (Maertz et al., 2007). Indeed, Shore and colleagues (2009) call for researchers to better understand the mechanisms by which social exchange affects employee

attitudes. Drawing on social exchange theory, we propose that supportive and trusting interpersonal relationships, such as supportive management, promote psychological safety, which in turn relates to lower employee turnover intentions (Blau, 1964; Kahn, 1990). Thus, we propose that psychological safety is one mechanism by which PSS relates to turnover intention. As such, we aim to provide theoretical explanations for why (Sutton & Staw, 1995; Whetten, 1989) PSS relates to employee turnover intentions.

Second, despite the widespread adoption of social exchange theory in the academic literature, little research has examined whether and how gender and culture moderate how social exchanges relate to employee attitudes and behaviors. In the current study, we begin to fill this gap in the literature by examining how PSS relates to turnover intentions in male-dominated occupations differently for men and women, as moderated by country gender equality. Adopting a multi-level and cross-cultural approach, we bring together these streams of research and contribute to theory and practice regarding how and why organizations can better retain women in male-dominated jobs globally while taking into consideration the social context surrounding GE. Understanding the mechanisms that drive turnover intentions, particularly among women in positions where they are under-represented, and in cultural environments of lower GE, can advance training interventions to help global managers become more effective at retaining their talent.

[Figure 1 near here]

Theory and Hypotheses

PSS and Turnover Intentions via Psychological Safety

Given the low representation of female employees in male-dominated occupations and the high costs associated with turnover in general (Deloitte, 2020), one goal of our study is to

understand how organizations can better retain their female employees in these occupations dominated by men. As such, we examine an employee attitude that is critical for employee retention: turnover intentions. We ground our first hypothesis in social exchange theory, which proposes that the quality of a relationship between individuals is a proximal cause of attitudes and behaviors, such as turnover intentions (Blau, 1964). In the context of organizations and employees, social exchange theory focuses on the relationships that employees form at work with their supervisor (Liden et al., 1997) and organization (Eisenberger et al., 1986). Greater social exchange is associated with better employee attitudes and behaviors such as higher commitment, lower turnover intentions, and better performance (Shore et al., 2009).

In the current study, we examine PSS—or the degree to which employees believe their "supervisors value their contributions and care about their well-being" (Eisenberger et al., 2002, p. 565; see also Kottke & Sharafinski, 1988)—as an aspect of social exchange that is important for employee turnover intentions. While previous studies have established that PSS is negatively related to turnover intentions (e.g., Maertz et al., 2007; Rhoades et al., 2001; Tuzun & Kalemci, 2012), little research has examined potential mechanisms by which this relationship occurs. In the current study, we draw on social exchange theory's norm of reciprocity to propose that psychological safety is a key mechanism by which PSS relates to turnover intentions.

Supervisors who foster a supportive workplace typically display concern for employees' needs and well-being, provide positive feedback, and encourage employees to voice their concerns, develop new skills, and solve work-related problems (Deci & Ryan, 1987; Duan et al., 2020). Indeed, Kahn (1990) found that supportive and trusting interpersonal relationships, as well as supportive management, promote psychological safety. When employees perceive support from their supervisors, they trust their supervisors more and are more likely to feel

valued and safe to express themselves without the fear of negative consequences (Carmeli & Gittell, 2009).

As suggested by the norm of reciprocity, when employees receive support from their supervisors, this should cause them to feel trusted and psychologically safe, leading to a sense of obligation to stay with the organization (e.g., Maertz et al., 2007; Rhoades et al., 2001). Employees who feel that they can be fully engaged in their work are more satisfied with their jobs and are more committed to staying with their organizations (Hackman & Oldham, 1976). As discussed above, psychological safety is particularly important to women's employee engagement in male dominated occupations because in these environments female employees tend to be shut down, or when they are listened, they are less likely to be recognized for their contributions (Grant & Sandberg, 2015). Indeed, Chandrasekaran and Mishra (2012) examined several teams in technology firms and found that team members are less likely to leave their team when they feel psychologically safe. Conversely, employees who feel like they cannot meaningfully contribute to their organizations (i.e., those who feel psychologically unsafe to contribute) will feel less motivated to do their job and will more likely look for alternative employment opportunities (Campero, 2021; Hackman & Oldham, 1976).

Thus, when employees believe they can express themselves, share ideas, make suggestions without the fear of embarrassment or negative consequences, and fulfill their expected role, they are less likely to want to leave the organization. We thus propose that psychological safety is a mechanism by which PSS relates to turnover intentions.

Hypothesis 1. The negative relationship between PSS and turnover intentions occurs indirectly through psychological safety.

Employee Gender and Country Gender Equality as Moderators of the Relationship between PSS and Psychological Safety

The relationship between PSS and psychological safety may also depend on aspects of the context (Blau, 1964). Indeed, scholars have proposed that contexts in which status differences exist may threaten one's social identity, hampering one's sense of psychological safety (Bunderson & Boumgarden, 2010). Social identity threat is a broad threat that people experience when they believe that they may be treated negatively or devalued in a setting simply because of an aspect of their identity (Abrams & Hogg, 1999; Tajfel & Turner, 1986). Women working in male-dominated jobs often experience identity threat because they are numerically under-represented, are seen as lower status when compared to men, and face negative gender stereotypes, because they violate social expectations (Dresden et al., 2018; Good et al., 2012; Murphy et al., 2007; Ridgeway, 2014; Ridgeway & Berger, 1986). Such environments hinder or impede women's perceived ability to gain influence at work or to express themselves without risk of negative consequences (Guillén et al., 2018; Kanter, 1977; Van Veelen et al., 2019).

Indeed, women in male-dominated occupations often experience enhanced visibility, a heightened sense of attention, and a greater risk of social isolation (Catalyst, 2021; Johnson et al., 2019; Kanter, 2008; Parker, 2018). For these reasons, PSS should be more important for women's psychological safety, compared to men's, in positions where they experience heightened identity threat, such as in male-dominated positions. Johnson and colleagues (2019) suggest that supportive supervisors or role models can serve as identity safety cues helping to reduce perceived threat based on one's gender or race. Given that men are often the majority group in male-dominated occupations, such as in construction, mining, and auto industries (Catalyst, 2021), and that their gender role aligns with stereotypes associated with these

occupations (Cheryan & Markus, 2020), they should experience higher levels of psychological safety when compared to women, regardless of PSS. As such, the relationship between PSS and psychological safety should be weaker for men when compared to women. Thus, by integrating the literatures on social exchange and social identity threat, we expect that PSS will be especially important for women's psychological safety in male-dominated careers when compared to men.

Hypothesis 2. PSS interacts with employee gender such that the positive relationship between PSS and employees' psychological safety is stronger for women than for men.

In addition, researchers have shown that the national context may also affect social exchange relationships (Jang et al., 2018). For example, country gender equality refers to gender-based gaps in access to resources and opportunities across different nations (World Economic Forum, 2017). More specifically, status differences between men and women are more exaggerated in countries of lower GE, which tend to have more traditional gender role beliefs (i.e., men as providers and women as homemakers and caregivers; House et al., 2004). In societies that are higher in GE, women and men tend to have similar levels of education and more equitable employment experiences (Javidan & House, 2001). When gender role differences are accentuated—as they are in places of lower GE—there is greater discrimination within the workplace, and women are considered lower status employees due to their expected role of being homemakers as opposed to breadwinners (House et al., 2004). As such, when female employees feel supported by their supervisors in contexts of lower GE, these employees may perceive the status gap to be narrower, and they are more likely to trust their supervisors and feel safer to express themselves. Indeed, researchers found that in countries of lower GE, supervisor support had a stronger effect on female employees' positive work attitudes and behaviors compared to those in countries of higher GE (Bosch et al., 2018). As such, we argue that PSS will be more

salient for underrepresented female employees' psychological safety when compared to men's, particularly for those located in countries of lower GE. On the other hand, PSS will be important for men, regardless of the country gender equality.

Hypothesis 3. PSS interacts with both employee gender and country gender equality such that the positive relationship between PSS and employees' psychological safety is (a) stronger for women in countries with lower GE than for women in countries with higher GE, and (b) the same for men regardless of country gender equality.

Considering the hypotheses above collectively, we propose a moderated mediation model in which PSS indirectly relates to turnover intentions via psychological safety, with this relationship being conditional on both employee gender and country gender equality.

Hypothesis 4. The relationship between PSS and employee turnover intentions occurs indirectly through psychological safety such that the negative indirect effect on turnover intentions is (a) stronger for women in countries with lower GE than for women in countries with higher GE and (b) the same for men regardless of the country gender equality.

Methodology

Sample and Procedure

The dataset was drawn from a global administration of the WorkTrends™ survey, an employee opinion survey administered by a global human resource organization to monitor cross-cultural trends in employee attitudes. This is a multi-topic survey completed online by a sample of workers screened to match a country's worker population. The survey has 115 items that cover a wide range of workplace issues, most of which were not relevant to our study. The survey was translated into the primary language for each country, and an independent party

double checked/back translated the content before the survey was administered to employees (Brislin, 1970).

The sample comprised 5,578 research and development (R&D) employees from different organizations across 24 countries (see Table 1 for sample size per country) and from a variety of industries such as manufacturing (e.g., electronics, computers, automobiles, machineries, large appliances, clothes, food, etc.), health care products and pharmaceuticals, construction and engineering, retail (e.g., food and clothing), services (e.g., hospitality, banking, etc.), agriculture and farming, government and educational institutions, among others. R&D is defined as "creative and systematic work undertaken in order to increase the stock of knowledge – including knowledge of humankind, culture and society – and to devise new applications of available knowledge" (OECD, 2015). We chose R&D employees for this study as women are underrepresented in R&D jobs globally (UNESCO Institute for Statistics, 2019) and tend to leave jobs in science and tech-intensive industries at higher rates than men (Beninger, 2014). Additionally, many organizations are challenged by a talent shortage and high turnover of R&D talent (Deloitte, 2020), and national context is important for retention of R&D employees due to the upsurge in offshoring R&D facilities within multinational subsidiaries (i.e., R&D globalization; Guinet & DeBacker, 2008; Nieto & Rodríguez, 2011; OECD, 2007). In addition, psychological safety is critical to job tasks associated with R&D positions, including voice behavior (Detert & Burris, 2007), learning (Carmeli et al., 2010), knowledge creation (Choo et al., 2007), and creativity (Madjar & Ortiz-Walters, 2009). Forty percent of the respondents were women and 77% were educated with a college degree or higher. Respondents' average age was 37.9 years (SD = 10.5) and their average organizational tenure was 3.6 years (SD = 1.2).

[Table 1 near here]

Measures

Unless otherwise noted, all measures used a 5-point Likert-type response scale, ranging from 1 = *strongly disagree* to 5 = *strongly agree*.

PSS. We used six items validated by Jang and colleagues (2018). A sample item is "My manager provides me with recognition or praise for doing good work" (α = .92).

Psychological safety. We used the following three items: "Sufficient effort is made to get the opinions and thinking of people who work here," "I feel free to try new things on my job, even though my efforts may not succeed," and "Where I work, ethical issues and concerns can be discussed without negative consequences" (α = .74). We discuss the validation of this scale below.

Turnover intentions. We used two items validated by Jang and colleagues (2018). A sample items is "I am seriously considering leaving my organization within the next 12 months (If you are retiring within the next 12 months or if you are going on leave, please indicate 'not applicable')" (α = .82).

Gender. We measured employee gender with the item "What is your gender?" (0 = *male*, 1 = *female*).

Country gender equality. We used the Global Gender Gap Index from the World Economic Forum (WEF)[1], which measures the relative gaps between women and men across the areas of health, education, economy and politics, and quantifies the magnitude of gender-based disparities in each country. The index grades gender equality using scores ranging from 0 to 1, where 1 corresponds to higher GE. Within our sample, values ranged from .60 (Turkey) to .85 (Finland).

Control variables. In addition to the focal predictor, mediator, moderators, and outcome variables described above, we also included potentially confounding variables in our model to partial out their effects. We controlled for employees' age (in years), education (1 = *less than high school diploma* to 7 = *professional degree or equivalent*), organizational tenure (1 = *less than one year* to 5 = *more than eleven years*), and whether the employee was on an expatriate assignment (0 = *no*, 1 = *yes*). We controlled for age because younger employees may require more supervisor support and may have higher turnover intentions than other-aged employees (Bal & Dorenbosch, 2015; Finegold et al., 2002, Yuan et al., 2021), and for these reasons, it is important to rule out the potential confounding effects of age on our model. More educated and more tenured employees are also more likely to have higher quality relationships with supervisors, and are more likely to leave their organizations as they may perceive themselves as more marketable and are more likely to find opportunities to develop their careers in other organizations (Parasuraman & Futrell, 1983). Indeed, age, education, and tenure have been found to contribute to employees' turnover intentions (Liu et al., 2012; Parasuraman & Futrell, 1983). Lastly, we included expatriate status to use as a control in our models because expatriates tend to leave the organization at a higher rate than local employees, such as unmet expatriates' expectations (Stahl et al., 2009), low career advancement opportunities (Lazarova & Cerdin, 2007; Stahl et al., 2009), expatriate adjustment to the international assignment (Ren et al., 2014), lack of support from the organization during the international assignment (Shaffer et al., 2001), spouse adjustment (Black & Stephens, 1989), among others. As a secondary check, we tested our model without any control variables and found that the results were consistent and remained statistically significant.[2]

Scale Validation

Validation of the psychological safety scale. Using a sample from Amazon's Mechanical Turk (MTurk), we conducted a validation study for the psychological safety scale. A total of 187 respondents completed the survey, however six participants were eliminated from the final sample due to careless responding. The final MTurk sample comprised 175 respondents located in the United States, of which three-fourths were white, 10% were black or African American, 7% were Hispanic or Latino, and 6% were Asian. In addition, 43% of the respondents were women and 62% had a college degree or higher. Their average age was 37.8 years (*SD* = 11.7), and their average tenure with their supervisor and organization were 5.6 years (*SD* = 7.3) and 8.0 years (*SD* = 7.1), respectively. We asked respondents to complete a survey that included the psychological safety scale used in this study and a psychological safety scale that was previously validated by Edmondson (1999). The correlation between the current study's scale and Edmondson's scale was .85, supporting the validity of the scale used in this study.

Exploratory factor analyses. We used separate and independent samples to build and test the measurement model underlying these scales, since testing the scales on the same sample used to build our model would have biased our model fit upwards (Fokkema & Greiff, 2017). The exploratory factor analyses (EFA) sample comprised 3,853 employees working in human resource management, drawn from the same countries as our measurement model confirmation and hypotheses testing sample (i.e., R&D employees described above). Sample demographics for our scale development sample were similar to those in our focal sample: 60% of respondents were women, 60% had a college degree or higher, and their average age was 39 years (*SD* = 10.6). We conducted EFA on our 11 initial items, employing principal axis factor extraction and direct oblimin rotation, as we expected the factors to be correlated (Conway & Huffcutt, 2003). SPSS v20 software was used for these analyses. The scree plot suggested a three-factor solution

was acceptable, with the interpretations of the factors corresponding to PSS, psychological safety, and turnover intentions, respectively. The factors explained 68% of the variance and all loadings exceeded .60 (see Table 2).

[Table 2 near here]

Confirmatory factor analyses. Using our focal sample (i.e., R&D employees), we tested the three-factor measurement model emerging from our EFA using confirmatory factor analyses (CFA) using Mplus v8 software. The three-factor measurement model for these constructs displayed a good fit to the data based on all standard fit measures (χ^2 = 867.29, df = 41, CFI = .98, RMSEA = .06 with 90% CI [.057, .064], TLI = .97, and SRMR = .02). We then compared this three-factor model (Model 1) with three plausible alternative two-factor models and a one-factor model. Model 2 combined PSS with psychological safety under one factor, Model 3 combined psychological safety with turnover intentions under one factor, Model 4 combined PSS and turnover intentions under one factor, and Model 5 combined all three variables under one factor (see Table 3 for the CFA results). Model 1 significantly outperformed each of the Models 2-5, providing superior fit indices and a significantly lower Chi-Square statistic, hence supporting our hypothesized measurement model in which our individual level measures capture distinct constructs as intended and reducing issues related to common methods bias. The standardized factor loadings for Model 1 are shown in Table 2, in parentheses.

Internal consistency. Following exploratory and confirmatory factor analyses, we ran internal consistency reliability tests for each construct within our three-factor model. Cronbach's alpha coefficients are shown in Table 4.

[Table 3 and Table 4 near here]

Measurement equivalence. Researchers have emphasized the importance of ensuring measurement equivalence when comparing survey scores across countries (e.g., Green & White, 1976; Schaffer & Riordan, 2003). Measurement equivalence refers to "whether or not, under different conditions of observing and studying phenomena, measurement operations yield measures of the same attribute" (Horn & McArdle, 1992, p. 117). Failure to determine measurement equivalence in cross-cultural studies may reduce reliability and validity of measures and invalidate comparison results across different cultures (Hult et al., 2008), as measurement variance may be caused by several other factors such poor translations, respondents' interpretation of scale items, how respondents answer survey questions, among other issues (Mullen, 1995). We tested for configural, metric, and scalar equivalence by conducting a multiple-group confirmatory factor analysis and inspecting the chi-square values of each model and their global fit measures for all countries included in this study (Asparouhov & Muthén, 2014). Results from these analyses reveal configural, metric, and scalar invariance of the scales across countries (see Table 5), indicating that results from this study are less likely to be biased by measurement variance.

[Table 5 near here]

Hypotheses Testing

Our dataset has a hierarchical structure (employees nested within countries) hence we used multilevel path analysis modelling to test our hypotheses, using the scale mean (composite) scores calculated across the respective sets of items for each construct. We country-mean centered all employee-level predictor variables to obtain unconflated estimates of the employee level main effects and cross-level interaction effects (Hofmann & Gavin, 1998). We grand-mean

centered our country-level predictor variable (our moderator country gender equality) to ease the interpretation of the intercepts and probing of the cross-level moderation.

We ran a sequence of 13 models to test our hypotheses and record model improvement and variance explained in outcomes at each stage (see Table 6 for the model development results). The initial unconditional model (Model 1) separated variance in our outcomes into employee and country level, providing baseline figures for overall model fit and variance to be explained. We then added controls and correlated our outcome variable: turnover intentions (Model 2). In Model 3, we linked the primary independent variable, PSS, to the dependent variable to test the total effect on each. Model 4 linked PSS to the mediator psychological safety and Model 5 linked psychological safety to turnover intentions. In Model 5, we also tested the indirect effect of PSS on turnover intentions via psychological safety, to test Hypothesis 1. In Models 6 and 7 we added the main effect of the moderator employee gender on the mediator psychological safety, and then the gender*psychological safety interaction, to test Hypothesis 2. Models 8, 9 and 10 made the main effects of PSS and employee gender on psychological safety, and their interaction, into random effects respectively, in order to assess the slope variance that could then be explained by our higher-level moderator of country gender equality. Finally, in Models 11, 12 and 13, we added paths from country gender equality to the random (country level) slopes representing main effects of PSS and employee gender on psychological safety, and their interaction. The effect of country gender equality on the latter provided a test of Hypothesis 3. Using this final model, we calculated conditional indirect effects from PSS to turnover intentions via psychological safety to test Hypothesis 4.

All analyses were conducted using Mplus v8 software (Muthén & Muthén, 2013). We followed multilevel path-analytic procedures outlined by Edwards and Lambert (2007) and

Preacher and colleagues (2007), using the Mplus code developed by Stride and colleagues (2015). Full information maximum likelihood estimation was used to fit models (Enders, 2010; Preacher et al., 2008). We tested the conditional indirect effects between the predictor variable (i.e., PSS) and the outcome variable (i.e., turnover intentions), via psychological safety, for female and male employees, at relatively low, medium and high levels of country gender equality (corresponding to the mean, +/- 1 standard deviation; Bauer & Curran, 2005). Two-tailed 95% confidence intervals for conditional indirect effects were calculated using Monte Carlo simulations (Preacher & Selig, 2012).

Results

Table 4 summarizes the means, standard deviations, intercorrelations, and alpha coefficients. Table 6 summarizes the 13 models that were run, detailing the improvement in model fit and variance explained at each level. Coefficients from our final model are given in Table 7.

We found that PSS is positively related to employees' psychological safety, explaining 39% of its variability (Table 6, Model 4 variance = (.723-.437)/.732) when entered into the model (model improvement: change in deviance = 2,859.97 on 1 df, p = .000), and with a significant positive coefficient in our final model (Table 7, b = .57, SE = .01, p = .000). We found that employee psychological safety was negatively related to turnover intentions (b = -.46, SE = 0.02, p = .000). Psychological safety explained 6% of the variance in turnover intentions (Table 6, Model 5: variance = (1.100-1.007)/1.448) when entered into the model (model improvement: change in deviance = 486.60 on 1 df, p = .000). Hypothesis 1 proposed that PSS would indirectly relate to turnover intentions via psychological safety. Hypothesis 1 was supported, as psychological safety partially mediated the negative relationship between PSS and

turnover intentions (b = -.27, SE = .01, with 95% CI [-.29, -.24]). Hypothesis 2 proposed that the strength of the positive relationship between PSS and psychological safety would be conditional on employee gender, such that the positive relationship would be stronger for women. This hypothesis was not supported. The effect of the interaction between PSS and gender was non-significant (model improvement: change in deviance = .08 on 1 df, p = .772), with no variance to be explained (Table 6, Model 7).

[Table 6 and Table 7 near here]

Hypothesis 3 proposed that the strength of the positive relationship between PSS and psychological safety would depend on both employee gender and country gender equality. This hypothesis was supported. When allowing the effect of the interaction between PSS and gender to vary between countries (Table 6, Model 10), the model fit was significantly improved (change in deviance = 7.31 on 1 df, p = .007), indicating that there was non-trivial variance to be explained. The between-country variance of this interaction term was .006. Half of this was explained by country gender equality (Model 13: variance = (.006-.003)/.006), further improving the model. Likewise, the path coefficient for this moderating effect of country gender equality on the interaction between PSS and gender (i.e., the three-way interaction of PSS, employee gender, and country gender equality) was significant (b = -1.09, SE = .42, p = .010).

When examining the simple slopes, the relationship between PSS and psychological safety was strongest for women in contexts of lower GE (simple slope b = .65, p = .000) compared to women in higher equality contexts (simple slope b = .49, p = .000). The pattern of the significant interaction for women is shown in Figure 2. However, for men, country gender equality makes negligible difference to the relationship between supervisor support and

psychological safety (in lower GE, simple slope b = .58, p = .000; in higher GE, simple slope b = .55, p = .000).

[Figure 2 near here]

Hypothesis 4 states that the effect of PSS on turnover intentions occurs indirectly via psychological safety, and that the degree of this effect is conditional on the employee gender and country gender equality. As shown in Table 8, there is a negative and significant indirect effect of PSS on turnover intentions via psychological safety for women, however, this effect is stronger for women in countries of lower GE (b = -.30, SE = .02, Monte Carlo 95% CI [-.34, -.27]) than for women in countries of higher GE (b = -.23, SE = .02, Monte Carlo 95% CI [-.26, -.20]). When testing between these effects, we found a significant difference (diff = -.07, Monte Carlo 95% CI [-.11, -.04]).

Table 8 also shows that there is a negative and significant indirect effect of PSS on turnover intentions via psychological safety for men at low, medium and high levels of GE. The effects for men in countries of lower GE (b = -.27, SE = .02, Monte Carlo 95% CI [-.30, -.24]) and men in countries of higher GE (b = -.25, SE = .02, Monte Carlo 95% CI [-.28, -.22]) are not significantly different (diff = -.01, 95% CI [-.04, .02]). These results support Hypothesis 4.

[Table 8 near here]

Discussion

In this study, we examined employees in male-dominated careers (i.e., R&D roles), and found that PSS relates to employees' psychological safety and turnover intentions, conditional on the employees' gender and the gender equality of the country where they are located. Our results support our proposed model (Figure 1). We found that psychological safety partially mediates the negative relationship between PSS and turnover intention. Additionally, PSS matters more for female employees in countries of lower GE compared to female employees in countries of

higher GE, yet it matters the same for men regardless of the country GE. This study has important theoretical and practical implications.

Theoretical Implications

From a theoretical viewpoint, our findings contribute to the literature in multiple ways. First, we advance understanding of the role of psychological safety as an explanatory mechanism for the effects of PSS on employee turnover intentions. We believe that this study is the first to demonstrate the role of psychological safety as an explanatory mechanism by which supervisors affect employees' turnover intentions. Previous studies have established the relationship between PSS and turnover intentions (e.g., Maertz et al., 2007; Rhoades et al., 2001; Tuzun & Kalemci, 2012), and some have examined mediators such as perceived organizational support (Cho et al., 2009; Eisenberger et al., 2002), job satisfaction (Mathieu et al., 2016) and organizational commitment (Mathieu et al., 2016). Yet, as suggested by Shore and colleagues (2009), explanatory mechanisms of the relationship between supervisor behaviors and employee attitudes may vary based on the unique context of the employee-supervisor relationship. While these previously examined mediators (referenced above) may apply to general samples of employees, we believe that psychological safety may be a particularly relevant mechanism for the relationship between PSS and turnover intentions for employees who work in teams that may experience higher levels of demographic faultlines and demographic dissimilarity (e.g., teams working in male-dominated occupations).

Indeed, we find that the relationship between PSS and psychological safety is not moderated by gender, indicating that this effect is consistent for both men and women in our sample. Other work examining teams with demographic dissimilarities and faultlines (Lau & Murnighan, 2005; Tröster & Van Knippenberg, 2012) shows that psychological safety is

especially important for employees of both the minority and majority groups. Such teams tend to have less trust among members and are less willing to collaborate and share ideas with one another. As such, we encourage future research to consider whether PSS's role on turnover intentions via psychological safety may be important for all group members of teams that have strong faultlines and demographic dissimilarity (i.e., male dominated groups), or whether this is especially relevant for employees occupying R&D roles which typically require tasks involving highly interdependent work activities characterized by open exchanges of ideas and frequent feedback (Gong et al., 2013).

Second, individual level research on gender diversity usually does not consider the cultural context where those individual relationships take place. In our study, we consider the country level context by integrating social exchange and social identity threat theories (Blau, 1964; Abrams & Hogg, 1999; Murphy et al., 2007; Tajfel & Turner, 1986) with research on cross cultural management (House et al., 2004), and answer the call by Gelfand and colleagues (2007) to examine the cultural context as a multilevel moderator. Gelfand et al. (2007, p. 497) state that research examining: "how cultural values at the national level interact with individual differences and situational contexts to predict attitudes and behaviors, is a needed wave of the future." Additionally, Shore and colleagues (2009, p. 291) discuss future research on social exchange in organizations and "the need to develop more nuanced models that reflect differences in individuals and societal cultural contexts".

Accordingly, we gained a better understanding of the moderating role of both individual level gender and country level gender equality on the relationship between PSS and psychological safety. Specifically, we proposed and found that the positive relationship between PSS and psychological safety is more salient for female employees in countries characterized by

cultural norms that have less gender equality. In these environments, women are less likely to speak up without the fear of negative consequences, and as such, PSS is especially important for their psychological safety, compared to women in higher GE contexts, and men in any context. Based on our findings, it seems that national GE may play a stronger role in affecting women's need for PSS and psychological safety, beyond the influence of simply being in a male-dominated occupation. Future research is needed to better understand this effect.

Indeed, previous research has suggested that how employees react to supervisors' influences may be culturally dependent (Bunderson & Boumgarden, 2010). Consistent with this notion, our findings test a proposition of social exchange theory (Blau, 1964), which supports the view that social exchanges are affected by contextual factors. Considering that most research in this area has used data collected in a single country, this finding complements the literature on supervisor support, gender, and psychological safety by showing that certain relationships may be dependent on both the employee gender and on the country where the employee works.

Practical Implications

A practical implication of our work is that leaders can aim to reduce turnover and knowledge spillover to competitors by providing support to their employees, fostering psychological safety (Feinberg & Gupta, 2004; Sanna-Randaccio & Veugelers, 2007). Organizations are thus encouraged to provide leadership training to their supervisors and emerging leaders to capitalize on the benefits of high-quality work relationships between supervisors and subordinates. Employees who feel supported by their leaders are more likely to feel psychologically safe and, in turn, to feel more satisfied with their jobs and less likely to leave the organization. Such support may be especially important for women in male-dominated roles, as research shows that when female employees in male-dominated occupations speak up,

they may be shut down; and when they are heard, their suggestions are less likely to be implemented or they are not given fair credit for their ideas (Sandberg & Grant, 2015). To support and encourage the development of high-quality relationships, organizations can also develop an annual evaluation whereby leaders and employees evaluate their work relationships, focusing on development and enrichment.

In addition, our results suggest that organizations that have offices located in countries of lower GE may especially benefit from introducing leadership training to help and encourage leaders to support and develop their female employees. This is particularly important because of the increasing trend of organizations moving their R&D facilities to their international subsidiaries (Nieto & Rodríguez, 2011; OECD, 2007), many of which are located in countries that are less gender egalitarian, and may be driving women away from R&D. By providing support to female R&D employees in these locations, organizations should increase retention and possibly attract highly qualified personnel to their global R&D facilities. Considering that gender roles and stereotypes are more salient in countries of lower gender equality, organizations in these contexts should implement and clearly communicate policies and structural mechanisms to protect women from gender discrimination (e.g., parental leave, childcare benefits, equity in earnings and promotions, penalties for discrimination, etc.; Kirton et al., 2016; Peetz, 2019). Such policies, when supported by sincere actions, are likely to positively affect women's psychological safety and increase their intentions to stay in their organizations.

Considering the international focus of our research, it is important that we also pay closer attention to issues related to variations in training effectiveness and policies' applicability in different cultural contexts. Indeed, studies have shown that the effectiveness of selected HRM practices (e.g., team building, cross-training, etc.) varies depending on the cultural context where

these practices are implemented (Hansen & Brooks, 1994; Von Glinow et al., 2002). For example, in a review of over 100 studies of cross-cultural research on human resource development (HRD), Hansen and Brooks (1994) found cultural differences in how HRD is interpreted, in training purposes, expectations, needs, and degree of organizational and leadership support, and in organizational approaches and employees' attitudes related to career development, among other things. Sarkar-Barney (2004) suggested that these and other factors are not equally motivating in all cultures. Burke and colleagues (2008) found that uncertainty avoidance and organizational safety climate are likely moderators of the relationship between transfer of safety training and safe work behavior and number of accidents. More recently, scholars also found that the HRD ideals of the country where many of these trainings are developed are seldom carried out in organizational training in other countries (Chevrier, 2009; Hansen, 2009). For example, in some countries (e.g., Germany), large corporations believe they already considered essential attributes of good managers during the recruitment and selection stage and, consequently, they may perceive additional training as unnecessary. In other countries (e.g., Côte d'Ivoire), direct supervisors (as opposed to HR managers) may have the final say when determining training needs and, as such, may not prioritize or recognize the need for gender diversity training for their employees, particularly in countries of low GE (Hansen, 2009). Conversely, in other countries (e.g., United States), the human resource department may be the key player in identifying training needs for the organization (Chevrier, 2009; Hansen, 2009). Thus, as organizations develop leadership training to encourage support and development of their leaders and employees, it is vital that they take into consideration several factors that could be affected by cultural and organizational differences.

Limitations and Future Research Directions

Despite the strengths of our research, such as the use of cross-cultural and multi-level data, which enabled us to examine the moderating roles of gender and country gender equality, this study also has some limitations that should be addressed in the future. First, our data are cross-sectional, thus limiting us from making statements regarding causality. Future research should utilize a longitudinal design to provide additional support for directionality of effects. Additionally, some of the variables in our study, but not all, were self-reported, which may raise concerns regarding common method variance. One way to address this concern is to use a longitudinal design, as mentioned above. Issues about common method variance could also be addressed in future research by using supervisor ratings of support towards the employee, in addition to objective measures of turnover instead of self-reported turnover intentions.

Considering that the focus of our study is on turnover intentions, instead of actual turnover, it is also important to expand our discussion on the turnover intention-behavior link. Several studies, including at least two meta-analyses (Rubenstein et al., 2018; Steel & Ovalle, 1984; Van Breukelen et al., 2004), have found that turnover intentions are the best predictor of actual turnover, among other attitudinal measures such as job satisfaction and organizational commitment. Yet others have found a weak correlation between the intention-behavior turnover measures (e.g., Allen et al., 2005; Tse et al., 2014). Several factors may explain these variations. For example, Allen and colleagues (2005) found that the relationship between turnover intentions and turnover behavior is moderated by individual differences, such as self-monitoring and risk aversion. The intention-behavior turnover relationship may also be conditional to occupational differences and social-economic factors (Griffeth et al., 2000; Hom et al., 1992). For example, Carsten and Spector (1987), found that the relationship is stronger when unemployment rate is low. Thus, turnover behavior is more complicated than turnover intentions

because there are several factors that may influence employees' decision to quit their jobs even when they intend to do so.

Nevertheless, turnover intentions are still an important attitude to measure in management research because even when employees who express their intention to quit stay in the organization, they are more likely to engage in less desirable work behaviors. For example, past studies have shown that higher turnover intentions may lead to lower organizational citizenship behaviors and higher deviance behaviors (Mai et al., 2016). Krishnan and Singh (2010) also found that turnover intentions are related to lower performance orientation and organizational citizenship behavior, and higher organizational deviance. Thus, although it is difficult to ascertain when those who indicate their intentions to quit will actually voluntarily leave their jobs, turnover intentions are still an important and relevant measure of organizational success.

Another potential limitation of our study is that we looked at one organizational context (i.e., R&D) where women are underrepresented and often face negative stereotypes. Future studies may attempt to replicate this study in other fields where women have low representation, such as transportation and military. Ideally, future research should also assess the percent of men and women on employees' teams in order to confirm how male-dominated one's role may be in their specific organization. Our sample also included fairly well-educated employees, and while we believe that PSS and psychological safety may be even more important for women who are less educated, this is an area for future research to examine further. Additionally, in this study, we examined psychological safety as one mediating explanation for the relationship between PSS and turnover intentions, which we believe is especially important for employees in male-dominated positions. Future studies could examine other mechanisms that were not considered in

this study that may also lead to positive work behaviors and attitudes for female employees in countries of lower GE. For example, research shows that supervisor support is key for work-family balance, which is especially important for female employees in lower GE countries (i.e., Greenhaus et al, 2012; Lyness & Kropf, 2005). Given that women in lower GE contexts experience considerable inequity (House et al., 2004), we also encourage future research to examine the importance of fairness and equity at work as a mediating mechanism for the relationship between supervisor support and turnover intentions. Relatedly, we believe it is important for future research to examine the unique, multiplicative, and interactive effects of supervisory relationships, as well as perceived fairness and voice, which are the most frequently cited reasons for the turnover of women in science and technology (Catalyst, 2008; Fouad et al., 2017).

Conclusion

By drawing on social exchange and social identity threat theories (Blau, 1964), and research on cross cultural management (House et al., 2004), we bring two important contextual perspectives (i.e., gender and culture) to the understanding of the relationships among PSS, psychological safety, and turnover intentions. Our findings demonstrate that PSS is important for employee turnover intentions, particularly for women in countries of lower GE, via the mechanism of psychological safety.

Data Availability Statement

The data that support the findings of this study is subject to third party restrictions. Data may be available from the authors depending on permission from the Smarter Workforce Institute.

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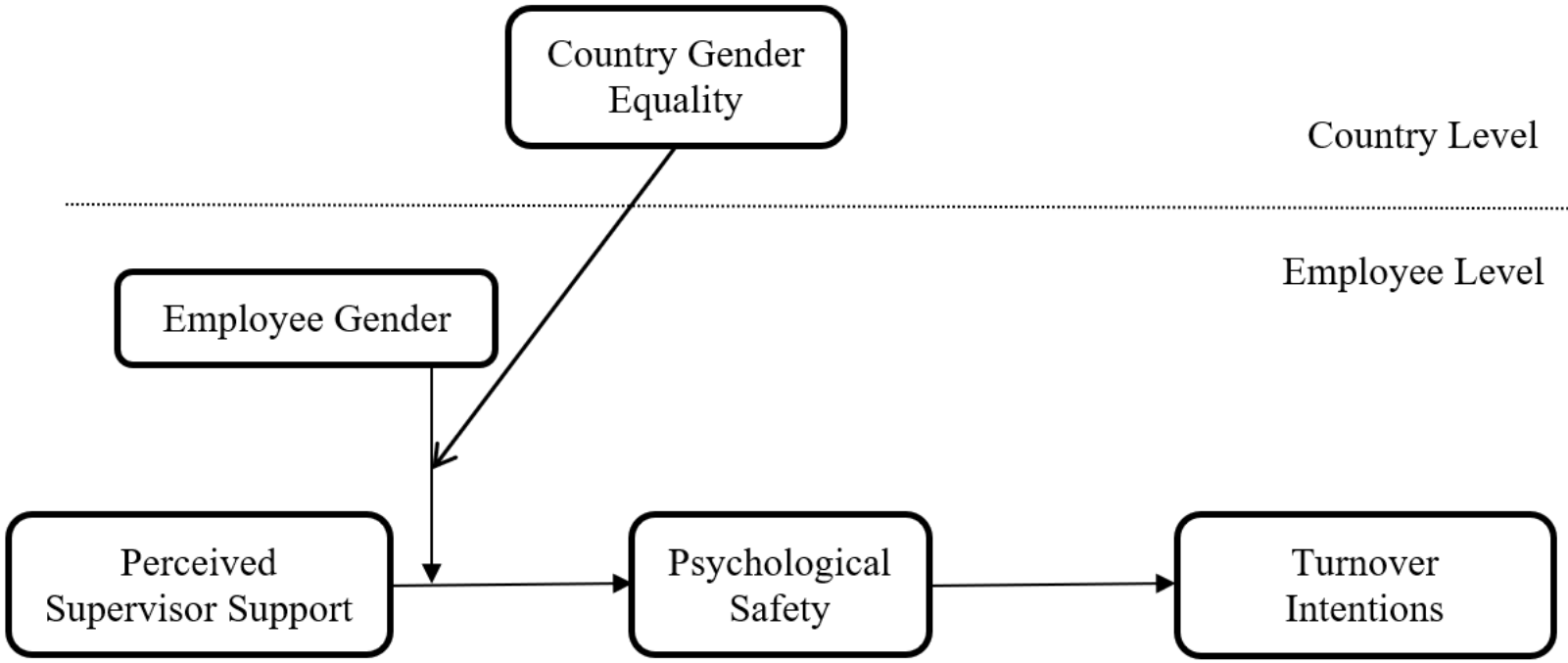

Figure 1. Hypothesized first stage moderated mediation model for the relationship between PSS and turnover intentions, via psychological safety. We omitted the control variables from the figure for parsimony.

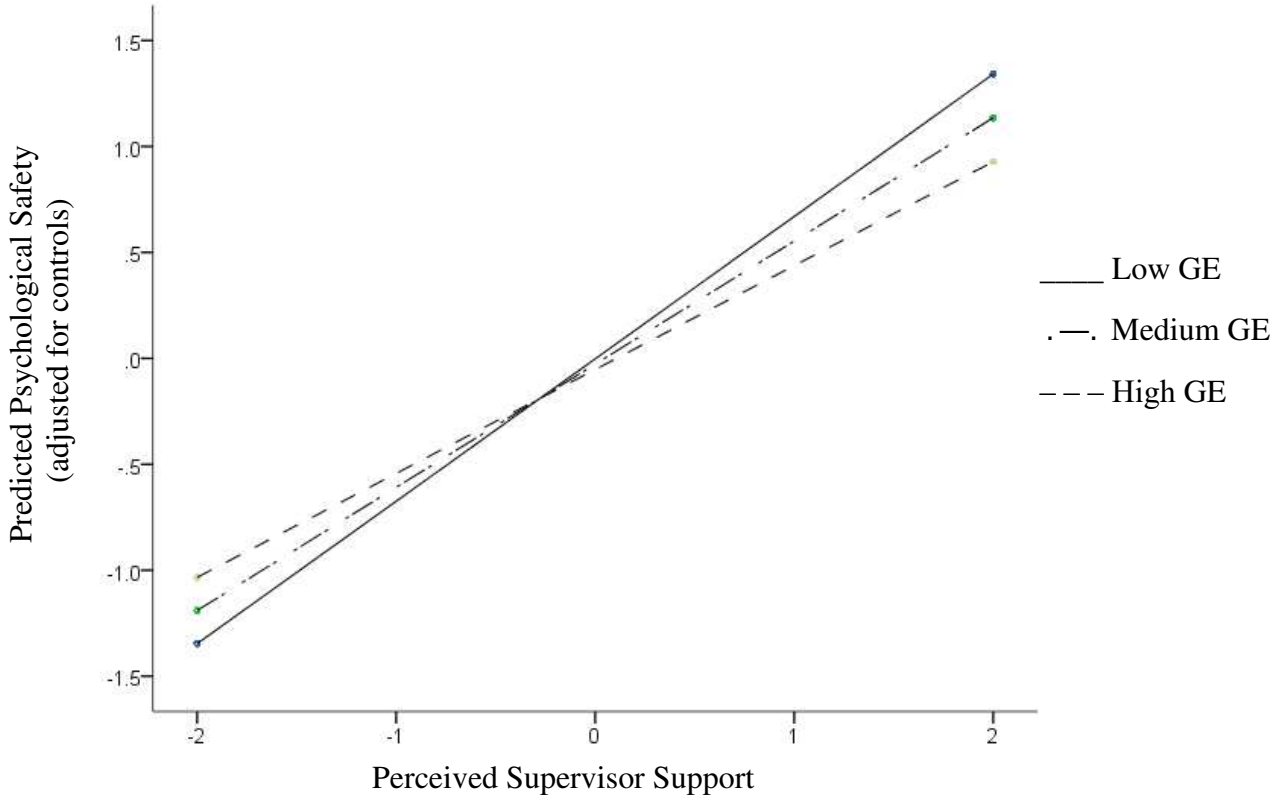

Figure 2. Country gender equality as a moderator of the relationship between PSS and psychological safety for female employees. Gender equality is measured at the mean and +/- 1 standard deviation. GE = gender equality.

Table 1

Country Level Sample Size

Country	Sample Size
Argentina	228
Australia	133
Brazil	372
Canada	105
China	420
Denmark	185
Finland	183
France	127
Germany	134
India	323
Indonesia	134
Italy	177
Japan	187
Republic of Korea	155
Mexico	234
Netherlands	139
Russian Federation	176
South Africa	235
Spain	157
Sweden	132
Switzerland	172
Turkey	297
United Kingdom	109
United States	1,064

Note. $N = 5{,}578$

Table 2

Pattern Matrix from the Exploratory Factory Analysis and Standardized Factor Loadings for Confirmatory Factor Analysis

Items	Factor Loadings		
	1 (PSS)	2 (PsyS)	3 (TI)
My manager is an effective listener.	**.90 (.82)**		
My manager treats me with respect and dignity.	**.84 (.84)**		
My manager gives me useful feedback on how well I'm doing my job.	**.84 (.81)**		
My manager provides me with recognition or praise for doing good work.	**.82 (.81)**		
My manager treats employees fairly.	**.81 (.83)**		
My manager keeps his/her commitments.	**.73 (.81)**		
Sufficient effort is made to get the opinions and thinking of people who work here.		**.81 (.74)**	
Where I work, ethical issues and concerns can be discussed without negative consequences.		**.64 (.69)**	
I feel free to try new things on my job, even though my efforts may not succeed.		**.64 (.67)**	
I am seriously considering leaving my organization within the next 12 months.			**.92 (.73)**
I rarely think about looking for a new job with another organization. (reverse-coded)			**.87 (.95)**

Note. N = 3,853 (EFA, HR sample). Extraction Method: Principal Axis Factor Analysis. Rotation Method: Direct Oblimin. N = 5,578 (CFA standardized factor loadings, R&D sample, in parenthesis). PSS = perceived supervisor support. PsyS = psychological safety. TI = turnover intentions.

Table 3

Confirmatory Factor Analysis Results

Models	Description	$\chi 2$, df	$\Delta\chi 2$, Δdf	CFI	RMSEA	TLI	SRMR
1 (3-factor)	PSS, PsyS, TI	867.29, 41	-	.98	.06	.97	.02
2 (2-factor)	(PSS+PsyS), TI	2,234.36, 43	+1,367.07, +2	.94	.10	.92	.05
3 (2-factor)	PSS, (PsyS+TI)	2,584.45, 43	+1,717.16, +2	.93	.10	.91	.05
4 (2-factor)	(PSS+TI), PsyS	3,632.54, 43	+2,765.25, +2	.90	.12	.87	.06
5 (1-factor)	(PSS+PsyS+TI)	4,510.15, 44	+3,642.86, +3	.87	.14	.84	.07

Note. N = 5,578. PSS = perceived supervisor support. PsyS = psychological safety; TI = turnover intentions. $\chi 2$ = chi-square test statistic. df = degrees of freedom. $\Delta\chi 2$ = change in chi-square compared to the three-factor model (Model 1). Δdf = change in degrees of freedom compared to the three-factor model (Model 1). CFI = comparative fit index. RMSEA = root mean square error of approximation. TLI = Tucker-Lewis index. SRMR = standardized root mean residual.

Table 4

Means, Standard Deviations, Correlations, and Reliabilities

	Variables	*M*	*SD*	1	2	3	4	5	6	7	8
1	Gender	0.41	0.49								
2	Age (years)	37.61	10.80	-.10							
3	Education	4.11	1.12	.01	-.08						
4	Organizational Tenure	3.55	1.24	-.07	.53	-.04					
5	Expatriate Status	0.08	0.27	-.04	-.08	.03	-.03				
6	PSS	3.64	0.95	.04	-.09	.05	-.05	.03	*(.92)*		
7	Psychological Safety	3.61	0.88	.01	-.09	.07	-.03	.07	.64	*(.74)*	
8	Turnover Intentions	2.51	1.22	-.03	-.05	.03	-.10	.03	-.48	-.49	*(.82)*
9	Gender Equality	0.71	0.06	.01	.26	-.15	.11	-.06	.00	-.02	-.02

Note: N = 5,578 (employee level). N = 24 (country level). Correlations for variables 1-10 that are equal or greater than .05 are significant at p = .000. PSS = perceived supervisor support. Gender: 0 = male, 1 = female. Education: 1 = less than high school diploma to 7 = professional degree or equivalent. Expatriate status: 0 = no, 1 = yes. Reliabilities (Cronbach's alpha) in parentheses.

Table 5

Measurement Equivalence Test Results

Measure Equivalence	$\chi 2$	df	$\Delta\chi 2$, Δdf	*p*	CFI	RMSEA	TLI	SRMR
Configural	2,324.08	984			.96	.08	.95	.04
Metric	2,680.94	1,168	+356.86, +184	.000	.96	.08	.95	.06
Scalar	3,626.57	1,352	+945.63, +184	.000	.94	.09	.94	.08

Note. N = 5,578. $\chi 2$ = chi-square test statistic. df = degrees of freedom. $\Delta\chi 2$ = change in chi-square. Δdf = change in degrees of freedom. *p* = p-value of model comparison. CFI = comparative fit index. RMSEA = root mean square error of approximation. TLI = Tucker-Lewis index. SRMR = standardized root mean residual.

Table 6

Model Comparisons and Variance Terms for Multilevel Path Analysis Models

Model	Description	Model Deviance	Change in Deviance, df	Change p-value	residual var TI	intercept var TI	residual var PsyS	var slope s1	var slope s2	var slope s3
1	Unconditional: TI and PsyS only	31,996.89	-	-	1.448	0.032	0.732			
2	Add effect of controls on TI, PsyS; correlate TI	31,87	127.89, 8	.000	1.43	0.032	0.723			
3	Add effect of PSS on TI	30,460.11	1,408.89, 1	.000	1.100	0.033	0.723			
4	Add effect of PSS on PsyS	27,600.14	2,859.97, 1	.000	1.100	0.033	0.437			
5	Add effect of PsyS on TI	27,113.54	486.60, 1	.000	1.007	0.034	0.437			
6	Add effect of gender on TI, PsyS	27,104.39	9.15, 2	.010	1.007	0.034	0.437			
7	Add effect of gender*PSS on PsyS	27,104.31	0.08, 1	.772	1.007	0.034	0.437			
8	Make effect of PSS on PsyS random (slope s1)	27,090.11	14.20, 1	.000	1.007	0.034	0.434	0.004		
9	Make effect of gender on PsyS random (slope s2)	27,071.52	18.59, 1	.000	1.007	0.034	0.431	0.003	0.013	
10	Make effect of PSS*gender on PsyS random (slope s3)	27,064.20	7.31, 1	.007	1.007	0.034	0.430	0.003	0.013	0.006
11	Add effect of gender equality on TI	27,063.84	0.36, 1	.546	1.007	0.033	0.430	0.003	0.013	0.006
12	Add effect of gender equality on s1, s2	27,053.77	10.07, 2	.007	1.007	0.033	0.430	0.001	0.011	0.006
13	Add effect of gender equality on s3	27,047.74	6.03, 1	.014	1.007	0.033	0.430	0.001	0.011	0.003

Note: N = 5,578 (employee level). N = 24 (country level). PSS = perceived supervisor support; PsyS = psychological safety; TI = turnover intentions. Change in Deviance = change in deviance compared to the previous model.

Table 7

Unstandardized Path Coefficients from Final Model (Figure 1)

	Psychological Safety			Turnover Intention		
	b	*S.E.*	*p-value*	*b*	*S.E.*	*p-value*
Level 1: Employees (within group)						
Control variables						
Age	-.00	.00	.017	-.01	.00	.000
Education	.02	.01	.005	.06	.01	.000
Organizational Tenure	.01	.01	.181	-.08	.01	.000
Expatriate Status	.12	.03	.001	.22	.05	.000
Predictor Variables						
Gender	-.05	.03	.124	-.05	.03	.054
PSS	.57	.01	.000	-.35	.02	.000
Gender x PSS	.01	.03	.663			
Psychological Safety				-.46	.02	.000
Level 2: Country (between group)						
Predictor Variables						
GE				-.42	.70	.545
Gender x GE	-.78	.52	.132			
PSS x GE	-.68	.22	.002			
PSS x Gender x GE	-1.09	.42	.010			

Note: N = 5,578 (employee level). N = 24 (country level). PSS = perceived supervisor support. GE = gender equality. Gender: 0 = male, 1 = female. Education: 1 = less than high school diploma to 7 = professional degree or equivalent. Expatriate status: 0 = no, 1 = yes.

Table 8

Conditional Indirect Effects of PSS on Turnover Intentions via Psychological Safety, Conditional on Employee Gender and Country Gender Equality

	Turnover Intention		
	Indirect effect	S.E.	MC 95% CI
Female, lower GE (-1SD)	-.30	.02	-.34, -.27
Female, medium GE (mean)	-.26	.02	-.29, -.24
Female, higher GE (+1SD)	-.23	.02	-.26, -.20
Male, lower GE (-1SD)	-.27	.02	-.30, -.24
Male, medium GE (mean)	-.26	.01	-.29, -.23
Male, higher GE (+1SD)	-.25	.02	-.28, -.22

Note: N = 5,578 (employee level). *N* = 24 (country level). MC 95% CI = Monte Carlo 95% confidence interval. GE = gender equality.

[1] We ran several post hoc analyses as robustness tests. First, we ran the analyses using gender egalitarianism (House et al., 2004) and Hofstede Masculinity (versus Femininity) (Hofstede, 2010) as the country level moderator, since those two cultural dimensions are directly related to gender equality. When using GLOBE's gender egalitarianism (instead of WEF) as the country level moderator, our results were consistent with the original results, further supporting our model. This was expected as both cultural dimensions (i.e., WEF and GLOBE's gender egalitarianism) look at gaps between men and women regarding, for example, their level of education and positions in power and authority. Conversely, when using Hofstede's Masculinity (versus Femininity) (instead of WEF) as the country level moderator, the three-way interaction was no longer statistically significant. This was not surprising considering that Hofstede Masculinity is more focused on social norms, such as ego-oriented behaviors (versus relationship-oriented behaviors), traditional family structures (versus flexible family structures), assertiveness/toughness and material success (versus balanced behaviors and aspirations), etc. Indeed, in a relatively recent debate, Hofstede noted that GLOBE's gender egalitarianism measure is perceived to be only one component of Hofstede Masculinity measure. In his own words, GLOBE attempted to replace "Masculinity–Femininity by four supposed components: Assertiveness, Performance Orientation, Gender Egalitarianism, and Humane Orientation." (Hofstede, 2010). House and colleagues (2004) argued that although several of Hofstede and GLOBE measures seem to be similar, such as their respective Power Distance and Uncertainty Avoidance, they questioned the validity of Hofstede's Masculinity measure. They suggest that the Hofstede Masculinity measure includes four different constructs and lacks face validity, and thus they developed their own measure of Assertiveness, Performance Orientation, Gender

Egalitarianism, and Humane Orientation. (Hofstede, 2010; House et al, 2004). Accordingly, particularly related to our model, gender egalitarianism may be equivalent to WEF gender gap as a country level moderator. However, since Hofstede's Masculinity includes items that do not measure gender-related construct, it should not replace WEF gender gap as a country level moderator in our proposed model. For information purposes, we also report the correlations between WEF gender equality and GLOBE gender egalitarianism (r = .51), WEF gender equality and Hofstede Masculinity (r = -.42), and GLOBE gender egalitarianism and Hofstede Masculinity (r = .30), for the countries included in this study.

[2] First, we ran our analyses using three additional controls: *leader gender* and *number of children* (at the individual level) and *Hofstede Collectivism (vs. Individualism)* (at the country level). When *number of children* was included as a control variable, our sample size dropped to less than half (N = 2,740) of the current sample size (N = 5,578) as this demographic variable was added to the survey after data collection had started. For the final manuscript, we made the decision to report the analyses without the *number of children* variable for the following reasons: (1) Due to multilevel nature of the model, a decrease in sample size may decrease the power of our analyses, and (2) a decrease in the overall sample size will, consequently, decrease the sample size per country. If we add the *number of children* as a control, 16 out of 24 countries will have a sample size of less than 100. Considering the analysis is sensitive to sample size, scholars have recommended a group sample size of at least 100 each (Brannick, 1995; Kelloway, 1995; Meade & Lautenshlager, 2004). However, the results were consistent with the results reported in our current manuscript, although leader gender and Hofstede Collectivism were not significantly related to any of the two outcomes (i.e., psychological safety and turnover intentions). Then, we ran the analyses again without *number of children*, and *leader gender* (at

the individual level) and *Hofstede Collectivism* (at the country level) were still not significantly related to any of our outcomes. For parsimony, we decided to run our final analyses without these control variables, and results remained consistent with our two first sets of analyses. Results from our first two rounds of analyses are available from the authors upon request.