

How to Increase Participation in Telework Programs in U.S. Federal Agencies: Examining the Effects of Being a Female Supervisor, Supportive Leadership, and Diversity Management

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Abstract

Previous research has established the connection between teleworking and organizational performance, but there remains a need to understand why employees who are eligible for telework programs do not necessarily utilize the programs. This study uses the 2013 Federal Employee Viewpoint Survey to examine the effects of being a female supervisor, supportive leadership, and diversity management, and the moderating effects of contextual factors on employee eligibility and participation in telework. We find that both supportive leadership and diversity management reduce the nonparticipation in telework programs of employees who are eligible and willing to telework. We also find that the interaction between being a female supervisor and supportive leadership reduces the nonparticipation in telework programs when employees are eligible for telework. These results imply that female supervisors who use supportive leadership are more likely to contribute to increasing the number of public employees who are able to participate in existing telework programs.

Keywords

telework, female supervisor, supportive leadership, diversity management

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Introduction

After Congress enacted the 2010 Telework Enhancement Act (TEA), institutional environments and sociological shifts have led U.S. workplaces to increasingly adopt telework programs (Cobert, 2016). In response to the TEA, the U.S. federal government has begun promoting telework programs to help employees achieve a better work–life balance (Facer & Wadsworth, 2008). For example, in 2014, President Obama issued a Presidential Memorandum entitled “Enhancing Workplace Flexibilities and Work-Life Programs.” This Memorandum gave federal employees more opportunities to utilize work–life programs such as telework, dependent care programs, and employee assistance programs. From 2013 to 2015, the number of federal employees who utilized telework programs increased from 17% to 20%, and 44% were eligible to telework in 2015 alone (Cobert, 2016).

Recent research shows that telework affects the work motivation and organizational performance of employees (Bae & Goodman, 2014; Bae & Yang, 2017; Caillier, 2012; S. Y. Lee & Hong, 2011; Saltzstein, Ting, & Saltzstein, 2001; Taskin & Edwards, 2007). Caillier (2012) finds that satisfaction is positively associated with telework and organizational commitment. S. Y. Lee and Hong (2011) and Saltzstein et al. (2001), on the contrary, find that telework is negatively associated with agency performance and work–life balance. Recent studies have distinguished between eligibility and participation in telework (Bae & Kim, 2016; Caillier, 2013; D. Lee & Kim, 2018). A report published by the U.S. Office of Personnel Management in 2013 stated that, although many federal agencies have officially adopted telework programs, some employees may not participate in these programs because of fear of reprisal or discrimination. Edelman (1992) states that, although an organization may adopt a certain program or policy to meet the demands of the institutional environment, employees may not actually utilize the program because of insufficient resources or internal conflicts. Oliver (1991) identified this phenomenon as a decoupling of the institutional environment from internal circumstances.

Recent studies show that decoupling between eligibility and participation in telework negatively affects organizational performance (Bae & Kim, 2016; Caillier, 2013; D. Lee & Kim, 2018). Caillier (2013) and D. Lee and Kim (2018) find higher turnover intentions and lower levels of perceived fairness and job satisfaction among employees who could not use eligible telework programs compared with employees who could use them. Furthermore, Bae and Kim (2016) find that employees who are eligible but unable to utilize telework programs are likely to have lower levels of job satisfaction than employees who are not eligible and unable to use telework programs. They also find that eligible female employees who cannot utilize telework programs show lower levels of job satisfaction than male employees who are not eligible and unable to use telework programs.

Although previous studies explored the negative effect of decoupling between eligibility and nonparticipation in telework on organizational performance, few studies have investigated strategies to help increase eligible employee participation in telework programs. Enhancing organizational performance and work motivation

necessitates examination of the factors that help reduce the condition of decoupling between eligibility and participation in telework. Therefore, we investigate the roles played by female supervisors, supportive leadership, and diversity management in reducing decoupling between organizational eligibility and participation in telework programs.

In the following section, we discuss employee eligibility for and participation in telework programs and a theoretical framework based on representative bureaucracy, perceived organizational support for family-friendly policies, and diversity management. We then describe the data and statistical methods used in this study before presenting the results of our analyses. We conclude with a discussion of our findings and a summary of their theoretical and practical implications.

Theoretical Background and Literature Review

Telework Programs: Eligibility and Implementation

The U.S. Office of Personnel Management (2013) has defined telework as “a work flexibility arrangement under which an employee performs the duties and responsibilities of such employee’s position and other authorized activities from an approved work-site other than the location from which the employee would otherwise work” (pp. 17-18). Under the TEA, all executive agencies have the discretion to establish policies on telework eligibility and participation. Scrutiny has revealed, however, that a discrepancy exists between eligibility and actual participation in telework programs. Although employees in federal agencies may be eligible to utilize existing telework programs, some are unable or unwilling to actually participate in the programs. Oliver (1991) and Edelman (1992) define this phenomenon as decoupling between eligibility and participation in telework. In this study, we focus on this scenario because past research showed that decoupling, or the discrepancy, between eligibility and participation in telework negatively affects organizational performance (Bae & Kim, 2016; Caillier, 2013; D. Lee & Kim, 2017). In fact, the 2013 Federal Employee Viewpoint Survey (FEVS) reported that 199,423 (59.7%) were notified of their eligibility to telework. A total of 148,373 (52.1%) of the respondents participated in telework programs, and 58,274 (15.5%) of sampled employees were unable to utilize existing telework programs.

Representative Bureaucracy

The concept of representative bureaucracy suggests that governments become more responsive to the public they serve when the demographic characteristics of bureaucrats reflect those of the general public (Krislov, 1974). That is, when bureaucrats make decisions, they represent, by virtue of the same or similar values and interests, their demographically socialized group (Meier, Wrinkle, & Polinard, 1999). Representative bureaucracy can be divided into two distinct forms: passive and active (Meier & Bohte, 2001; Mosher, 1982). Passive representation refers to a bureaucracy composed of “the same demographic origins (gender, race, income, class, religion,

etc.) as the population it serves,” to be more responsive to various social issues (Wilkins & Keiser, 2006, p. 88).

Active representation, on the contrary, refers to bureaucrats using their discretion in imparting benefits to the represented group (Meier, 1993; Meier & Funk, 2017; Meier & Stewart, 1992; Pitkin, 1967; Sowa & Selden, 2003; Wilkins, 2007; Wilkins & Keiser, 2006). For example, Bradbury and Kellough (2011) argue that “active representation of group interests occurs because individual bureaucrats reflect the views of those who share their demographic backgrounds” (p. 157). Thus, responsiveness is due to bureaucrat employees’ discretions to represent their groups. Sowa and Selden (2003) find that minority supervisors with discretion tend to address minority interests. Regarding active representation on gender issues, Riccucci and Meyers (2004) note that “the theory of active representation holds, for example, that women as compared with men working in the bureaucracy are more likely to push for programs and issues that benefit women in the general population” (p. 585). Empirically, Wilkins (2007) finds that female supervisors pay more attention to women-friendly goals than male supervisors. Furthermore, Wilkins and Keiser (2006) find that greater representation of women in bureaucracies leads to more child support enforcement. Finally, Meier and Funk (2017) find that female elected officials tend to appoint women as agency leaders.

In this study, we apply the theory of active representation to predict that female supervisors, more so than male supervisors, tend to promote participation in telework programs because these programs are typically more favorable to female employees than to male employees because of the burdens of nonwork duties such as housework and childcare (Bansal & Agarwal, 2017; Clark, Rudolph, Zhdanova, Michel, & Baltes, 2017; Guinn, 2017; Parasuraman & Simmers, 2001; Selvarajan, Slattery, & Stringer, 2015; Tang & Cousins, 2005; Tower & Alkadry, 2008). The U.S. General Accounting Office (2003) has pointed out, however, that although female employees want to take advantage of teleworking opportunities, resistance from management or specific organizational culture factors lead some agencies to not institute telework programs. Some research shows that female workers experience family responsibility discrimination and maternal wall bias regardless of their status (Hoobler, Wayne, & Lemmon, 2009). In this context, Foley, Linnehan, Greenhaus, and Weer (2006) argue that supervisors who themselves juggle household duties may be more likely to promote the use of family-friendly programs.

Active representation states that when a female employee becomes a supervisor, she pays more attention to making workplace environment women-friendly because female employees consider women-friendly workplace environment to be very important. Given the theoretical background and past findings, we contend that being a female supervisor is more likely to support telework programs and help eliminate family-unfriendly environments that result in employees being unable to participate in telework programs for which they are eligible. Accordingly, we hypothesize that being a female supervisor would help reduce the nonparticipation in telework programs of employees who are eligible and willing to telework.

Hypothesis 1 (H1): Being a female supervisor reduces the nonparticipation in telework programs of employees who are eligible and willing to telework.

Perceived Organizational Family Support

Jahn, Thompson, and Kopelman (2003) define perceived organizational family support as “the extent to which a supervisor is perceived to be flexible and understanding when employees need to deal with family demands” (p. 127). They describe three categories of perceived organizational family support: instrumental (childcare leave programs, financial support for childcare, and flexible schedules), informational (actual communication regarding available family-friendly programs), and emotional (acknowledgment and acceptance of employees’ nonwork needs). Thompson, Beauvais, and Lyness (1999) find that perceived organizational family support increases employees’ actual use of family-friendly benefits and promotes positive attitudes toward their organizations.

Many scholars also agree on the importance of perceived organizational family support including family-friendly cultures and supervisor support (Allen, 2001; Thompson, Andreassi, & Prottas, 2005). Research also shows that supervisorial support plays a significant role in encouraging employee utilization of family-friendly programs. For instance, the U.S. General Accounting Office (2003) reports that some supervisors in federal agencies are reluctant to allow their employees to utilize telework programs because they prefer face-to-face interaction. Likewise, the U.S. Office of Personnel Management (2013) identified managerial resistance as the main barrier preventing employees from using existing telework programs. Previous empirical studies have also emphasized the role of supportive supervisors in employees utilizing family-friendly programs (Allen, 2001; Casper, Fox, Sitzmann, & Landy, 2004; Kim & Mullins, 2016; C. M. Lee & Duxbury, 1998).

Upon interviewing a sample of Canada’s federal employees, C. M. Lee and Duxbury (1998) observed that working mothers consider support and understanding from supervisors or coworkers to be more important than the support from their spouses. This finding suggests that when female employees feel that their supervisors or coworkers are displeased with their participation in certain family-friendly programs, they will be less likely to participate. Allen (2001) finds that supportive supervisors can relieve family–work conflicts, which often leads to increased employee job and family satisfaction. In addition, Casper et al. (2004) examine whether supervisors with more positive attitudes toward family-friendly policies are more likely to refer their employees to these programs. They find that supervisors’ awareness of family-friendly policies, positive perceptions about these policies, and supportive attitudes are all positively associated with employee use of family-friendly programs. Kim and Mullins (2016) also analyze the effects of supervisorial support for work–life balance on actual participation in family-friendly programs. They find that public employees are more likely to utilize family-friendly programs when their supervisors encourage work–life balance. We therefore hypothesize that supportive leadership is negatively associated with employees’ nonparticipation in telework programs for which they are eligible.

Hypothesis 2 (H2): Supportive leadership reduces the nonparticipation in telework programs of employees who are eligible and willing to telework.

Diversity Management

Diversity management is defined as “planning and implementing organizational systems and practices to manage people so that the potential advantages of diversity are maximized while its potential disadvantages are minimized” (Cox, 1993, p. 11). Pitts, Hicklin, Hawes, and Melton (2010) also state that diversity management is an organizational response creating an environment that serves diverse employees. This concept arose initially to address the concerns of underrepresented racial and gender groups and has since branched out to encompass underrepresented age, religious, cultural, and professional groups (Kellough & Naff, 2004; Pitts, 2006; Riccucci, 2002; Wise & Tschirhart, 2000). Research shows that organizational environments that support diversity management can help resolve differences among groups within organizations and also demonstrates that organizational environments that value diversity management help promote harmony and relieve relational conflicts (Choi, 2009).

Recent studies indicate that employees may be reluctant to utilize family-friendly programs for fear of burdening or generating conflict among colleagues, even in organizations that adopt such policies (Casper & DePaulo, 2012; Casper, Weltman, & Kwesiga, 2007; Riccucci, 2002). Moreover, some studies find that employees with children favor family-friendly policies, whereas those without—especially single males and females—feel discriminated against (Casper et al., 2007). This phenomenon can lead to conflict between beneficiaries and non-beneficiaries within organizations, which may make employees unwilling to utilize family-friendly programs so as to avoid generating conflict among their colleagues. Diversity management can play a pivotal role in relieving this conflict. Consequently, employees in organizations that value diversity management are more likely to utilize family-friendly programs.

Existing research highlights the importance of diversity management in employees’ actual participation in family-friendly programs (Allen, 2001; Kim & Mullins, 2016; Riccucci, 2002). Riccucci (2002) finds that, in organizations that do not value diversity, employees perceive family-friendly policies as discriminatory against workers who do not use the programs. Thus, employees may be reluctant to utilize family-friendly programs because they fear negative consequences. Kim and Mullins (2016) also examine the effects of diversity management on employees’ use of family-friendly programs. They find that public employees are more likely to use family-friendly programs when organizations engage in diversity management. Based on these previous findings, we hypothesize that diversity management will increase the participation in telework programs of employees who are eligible and willing to telework.

Hypothesis 3 (H3): Diversity management reduces the nonparticipation in telework programs of employees who are eligible and willing to telework.

Interactional Relationships

Previous research on diversity management suggests the existence of potential interactional relationships between supportive leadership and diversity management.

Because diversity management is a human resource management practice, supervisory support can be crucial for successfully implementing such practices (Nishii & Özbilgin, 2007). Nishii and Özbilgin (2007) suggested that supportive leadership at an agency's top level, specifically their understanding and willingness to support diversity, as well as a strong organizational culture of inclusiveness, is key to strengthening diversity management practices. They argue that employees consider supervisory support for diversity as an organizational benefit and as a positive signal that their organization considers employees' well-being (Rhoades & Eisenberger, 2002). This conceptual framework is rooted in the individual psychological view of supervisors as agents of organizations (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002).

There is empirical evidence to support the relationship between supervisory support and diversity management. For example, Rynes and Rosen (1995) find that top managerial beliefs in and key strategies on diversity management positively affect employee perceptions on organizational support for diversity. Furthermore, Triana, García, and Colella (2010) also find that supervisory support for diversity moderates the negative relationship between perceived workplace discrimination and affective commitment.

Specific to public organizations, Kim and Mullins (2016) examine the moderating impacts of diversity management on the relationship between supportive supervisors and an individual's propensity to participate in family-friendly programs. Furthermore, Ko, Hur, and Smith-Walter (2013) find that supportive supervisors can moderate employee satisfaction with family-friendly programs and jobs in general. Finally, supportive leadership is considered a key factor in effective diversity management in the workplace (Riccucci, 2002). Because female employees are more likely than male employees to prefer telework programs (Bélanger, 1999), supervisory roles and the level of diversity management are important for promoting telework programs and for increasing participation. Therefore, we present the potential interactional relationships between two variables using moderating relationships in our empirical model.

Baron and Kenny (1986) define their moderator as "a variable that affects the direction and/or strength of the relationship between an independent or predictor variable and a dependent or criterion variable" (p. 1174). Thus, we expect that the effect of female supervision, combined with supportive leadership, on organizational support and employee participation in telework can be significant. Although the role of female supervisors alone may significantly induce employees to utilize telework programs, supportive leadership also plays a vital role in increasing actual utilization. As a moderator, diversity management may affect the relationship between female supervisors and organizational support and employee participation in telework programs. This study also aims to determine whether diversity management could moderate the effect of supportive leadership on employee participation in telework programs.

Hypothesis 4 (H4): Supportive leadership moderates the relationship between being a female supervisor and nonparticipation in telework programs of employees who are eligible and willing to telework.

Hypothesis 5 (H5): Diversity management moderates the relationship between being a female supervisor and nonparticipation in telework programs of employees who are eligible and willing to telework.

Hypothesis 6 (H6): Diversity management moderates the relationship between supportive leadership and nonparticipation in telework programs of employees who are eligible and willing to telework.

Data and Method

Sample

To test the hypotheses above, we use the 2013 FEVS. Since 2002, the U.S. Office of Personnel Management surveyed full-time and permanent federal employees regarding their perceptions and attitudes toward their work environments. Of the 781,047 employees who initially received the survey, 376,577 employees responded (a 48.2% response rate). Of the respondents, there were 164,963 females (48.47%), 6,249 female supervisors (6.9%), and a total of 112,936 minorities (29.99%). The largest portion of respondents (32.48%) was between 50 and 59 years of age. Moreover, 41.74% of the surveyed employees had worked 15 years or more in the federal government.

Dependent Variables

The 2013 FEVS measures telework eligibility using the following question: "Have you been notified that you are eligible to telework?" Possible answers are "yes," "no," or "not sure." We therefore use a dichotomous variable: "yes" coded as 1 and "no" as 0. We treated "not sure" as missing. The survey measures employee participation in telework with the following question: "Please select the response below that best describes your current teleworking situation." Possible responses are as follows: "Telework," "I do not telework because I am not able to telework," and "I do not telework because I choose not to telework." This study dropped the third category because it reflects an employee's preferred choice. To derive the dependent variable "the nonparticipation in telework programs of employees who are eligible and willing to telework," we include the interaction terms of two dummy variables using the two questions about telework eligibility and participation.

Explanatory Variables

This study includes three explanatory variables: female supervisor, supervisor support, and diversity management. We derived the female supervisor variable from the two dummy variables presented in the 2013 FEVS data: one indicating whether or not the employee is a supervisor and the other indicating the employee's gender. Using the interaction term of these two dummy variables, we coded female supervisor as a dichotomous variable: "yes" as 1 and "no" as 0. The second explanatory variable is supportive leadership. Following the procedures used by Choi (2009) and Moon

(2016), we measured supervisor support by calculating the average of three questionnaire items: (a) My supervisor supports my need to balance work and other life issues, (b) Supervisors/team leaders in my work unit support employee development, and (c) Senior leaders demonstrate support for work–life programs. The mean is 2.54 and the Cronbach alpha is .752. Following the procedures used by Choi (2009), Choi and Rainey (2010), and Pitts (2009), we measured diversity management by obtaining the average of three questionnaire items: (a) Policies and programs promote diversity in the workplace (e.g., recruiting minorities and women, training in awareness of diversity issues, and mentoring), (b) My supervisor/team leader is committed to a workforce representative of all segments of society, and (c) Managers/supervisors/team leaders work well with employees of different backgrounds. The mean is 2.51 and the Cronbach alpha is .743.

Control Variables

To improve model specification, we include some demographic characteristics of employees and their job-related characteristics. Previous research on telework controlled for demographic variables such as minority, age, and agency experience (Bae & Kim, 2016; Caillier, 2012, 2013; Kim & Mullins, 2016). Minority is a dichotomous variable, which we recorded as “0” if the respondent is a nonminority and “1” if the respondent is a minority. Age is an ordinal variable that we categorized into less than 40 years, 40 to 49 years, and 50 years or more. We transformed this ordinal variable into a series of dichotomous variables. This study also includes agency experience (a measure of years of work experience), which we categorized into 5 or fewer years, 6 to 14 years, and 15 or more years. We also transformed agency experience into a series of dichotomous variables. We added agency fixed effects to control for time-invariant unobserved agency effects.

Results

Table 1 presents the descriptive statistics for the analysis sample. Although the correlation between diversity management and supportive leadership is strong (see the appendix), the results of the variance inflation factor (VIF) test indicate that all VIFs are below 2.1, suggesting that multicollinearity is not an issue in this model.

Table 2 shows the results of the logit regression analysis, which examines the effects of being a female supervisor, supportive leadership, and diversity management on the nonparticipation of eligible telework programs for employees who are willing to telework.

Hypothesis 1 predicts that being a female supervisor reduces the nonparticipation in telework programs of employees who are eligible and willing to telework. The results do not, however, support this hypothesis. Regarding the odds ratio, Long and Freese (2006) state that “for a unit change in predictor variable, we expect the log of the odds of the outcome to change by coefficient value, holding all other variables constant” (p. 228). The odds ratio of the female supervisor variable was 0.996, which means that having a female supervisor reduces the odds of employee nonparticipation

Table 1. Descriptive Statistics for Variables.

Variables	M, SD, distribution	Domain	Questionnaires
Nonparticipation of eligible telework programs for employees who are willing to telework	Yes = 58,274 No = 318,303	0-1	Eligibility: Have you been notified that you are eligible to telework? Telework means working at a location other than your normal worksite during your regular work hours (excludes travel). (1) Yes/(2) No Note: The variable is coded as a dichotomous variable; Yes is coded 1 and No is coded 0. Participation: Please select the response below that BEST describes your current teleworking situation. (1) Telework/(2) I do not telework because I am not able to telework/(3) I do not telework because I choose not to telework. Note: The variable is coded a dichotomous variable; (1) is coded 1 and (2) is coded 0. This study drops item (3) "I do not telework because I choose not to telework" to focus on organizations that allow employees to participate in telework. Nonparticipation of eligible telework programs for employees who are willing to telework: For the "nonparticipation of eligible telework programs for employees who are willing to telework" group, this research includes the interaction term of two dummy variables using the above two questions regarding telework eligibility and participation.
Female supervisor	Yes = 26,249 No = 309,899	0-1	Female: Are you? (1) Male/(2) Female Note: Female is coded as 1. Supervisory status: What is your supervisory status? (1) Non-supervisor/(2) Team leader Supervisor/Manager/Executive Note: (1) is coded 0, (2) is coded 1. Female supervisor: Using the interaction term of these two dummy variables, a female supervisor is coded as a dichotomous variable. Female supervisors are coded as 1, whereas others are coded as 0.

(continued)

Table 1. (continued)

Variables	M, SD, distribution	Domain	Questionnaires
Supportive leadership ($\alpha = .752$)	M = 2.54 SD = 0.57	1-3	1. My supervisor supports my need to balance work and other life issues. 2. Supervisors/team leaders in my work unit support employee development. 3. Senior leaders demonstrate support for work/life programs. 1. Policies and programs promote diversity in the workplace. 2. My supervisor/team leader is committed to a workforce representative of all segments of society. 3. Managers/supervisors/team leaders work well with employees of different backgrounds.
Diversity management ($\alpha = .743$)	M = 2.51 SD = 0.57	1-3	Are you a minority? (recoded variable) (1) Minority, (2) Nonminority Note: The variable is coded as a binary variable; 1 is coded as 1 and 2 is coded as 0.
Minority	Minority = 112,936 Nonminority = 218,449	0-1	
Age	Less than 40 = 73,886 40-49 = 94,642 50-59 = 122,345 60 or older = 46,369	1-4	What is your age group? (a) Less than 40, (b) 40-49, (c) 50-59, (d) 60 or older
Agency experience	5 years or less = 83,706 6-14 years = 109,520 15 years or more = 157,187	1-3	How long have you been with the federal government (excluding military service)? (a) 5 years or less, (b) 6-14 years, (c) 15 years or more

Table 2. Coefficient From Logit Regression of Nonparticipation of Eligible Telework Programs for Employees Who Are Willing to Telework.

	Nonparticipation of eligible telework programs for employees who are willing to telework
	Odds ratio
Female supervisor	0.996
Supportive leadership	0.833***
Diversity management	0.891***
Minority	1.137***
Age	
40-49	0.967
50-59	1.045*
60 or older	1.049
Agency experience	
6-14 years	1.032
15 or more years	1.144***
Female supervisor × Supportive leadership	0.899*
Female supervisor × Diversity management	1.001
Supportive leadership × Diversity management	0.996
Agency fixed effect	Yes
Constant	-1.879*** (0.069)
Pseudo R^2	.004
N	211,287

* $p < 0.1$, *** $p < 0.01$.

Note. The coefficients and standard error (in parenthesis) are reported. Agency fixed effect "Yes" means that it includes agency dummy variables.

in telework programs for which they were eligible by 0.996 times more than male supervisors, holding all other variables constant.

Hypothesis 2 predicts that supportive leadership reduces the nonparticipation in telework programs of employees who are eligible and willing to telework. Our findings support Hypothesis 2 (odds ratio = 0.833, $p < .01$), indicating that for a one-unit increase in supportive leadership, the odds of employee nonparticipation in telework when eligible is reduced by a factor of 0.833, holding all other variables constant. Hypothesis 3 states that diversity management reduces the nonparticipation in telework programs of employees who are eligible and willing to telework. The results of our analysis support Hypothesis 3: The effect of diversity management on employee nonparticipation in telework when eligible is negative and significant (odds ratio = 0.891, $p < .01$). This indicates that for a one-unit increase in diversity management, the odds of employee nonparticipation in telework when eligible is reduced by a factor of 0.891, holding all other variables constant.

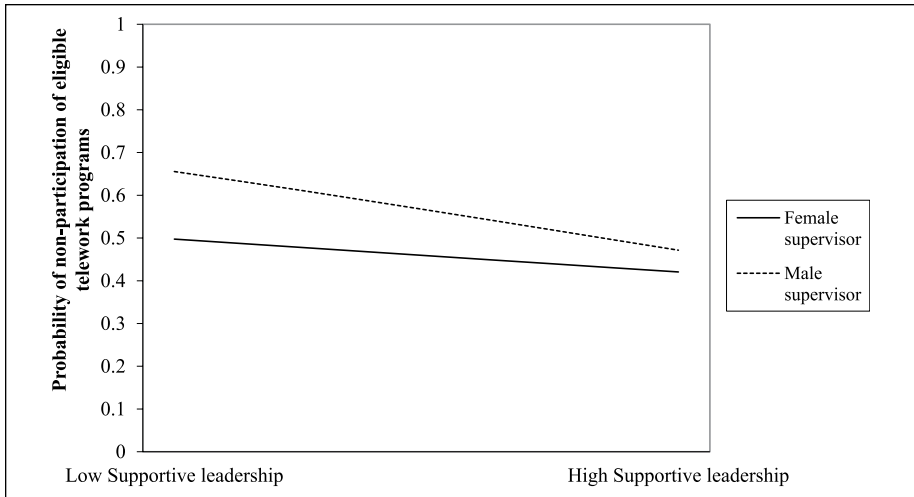


Figure 1. Moderating effect of female supervisor and supportive leadership on the nonparticipation of eligible telework programs for employees who are willing to telework.

Hypothesis 4 predicts that supportive leadership would moderate the relationship between being a female supervisor and the nonparticipation in telework programs of employees who are eligible and willing to telework. The results support Hypothesis 4: The estimated coefficient of the interaction term between being a female supervisor and supportive leadership is statistically significant and negative (odds ratio = 0.899, $p < .1$). This indicates that the likelihood of employee nonparticipation in telework when eligible is lower under female supervisors who provide supportive leadership. Figure 1 plots this interaction, showing the moderating effects of being a female supervisor and supportive leadership on nonparticipation in eligible telework programs. Figure 1 also illustrates that being a female supervisor who engage in highly supportive leadership is more likely to reduce nonparticipation among eligible employees in telework programs than male supervisors.

Hypothesis 5 predicts the moderating role of diversity management on the relationship between being a female supervisor and eligible employee nonparticipation in telework programs. We find that the interaction term between a female supervisor and diversity management is not statistically significant. Hypothesis 6 predicts that diversity management would moderate the relationship between supportive leadership and the nonparticipation in telework programs of employees who are eligible and willing to telework. Our results do not support Hypothesis 6.

Discussion and Conclusion

This study examines the effects of being a female supervisor, supportive leadership, diversity management, and the moderating effects of contextual factors on organizational

support and nonparticipation in telework programs. We find that both supportive leadership and diversity management reduce the nonparticipation in telework programs of employees who are eligible and willing to telework. The results also show that the interaction between female supervisors and supportive leadership is negatively associated with nonparticipation in telework when eligible. These results imply that female supervisors who practice supportive leadership help reduce the number of public employees who are unable to participate in existing telework programs.

Previous studies focus on analyzing the effects of perceptions of supportive family-friendly cultures, supervisorial support, and diversity management on participation in family-friendly programs (Allen, 2001; Kim & Mullins, 2016; Thompson et al., 1999). Hence, the contribution of this study is its investigation of the effects of female supervisors, supportive leadership, and diversity management on reducing the decoupling between telework eligibility and participation.

Many studies show that decoupling between telework eligibility and participation negatively affects job satisfaction, perceived fairness, and intention to stay at a job (Bae & Kim, 2016; D. Lee & Kim, 2018). Thus, the conflict between organizational eligibility and actual participation in telework programs may negatively influence organizational performance in the long run. Therefore, supportive leadership, diversity management, and female supervisors who engage in supportive leadership may bolster organizational performance by eliminating the negative factors that hinder performance, such as being discouraged from participating in a telework program for which an employee is eligible.

The results of this study have several theoretical implications. This study applies the notion of perceived organizational support from previous literature highlighting the importance of supervisor support in the utilization of family-friendly programs (Allen, 2001; C. M. Lee & Duxbury, 1998; Thompson et al., 2005). The results of this study are consistent with previous studies that emphasize the role of supportive leadership. Furthermore, research suggests that diversity management helps to harmonize differences between employees and relieve relational conflicts (Choi, 2009). Our findings corroborate the notion that diversity management encourages participation in telework programs by relieving conflict between beneficiaries and non-beneficiaries.

This study also examines the application of representative bureaucracy by testing the hypothesis that when a female employee becomes a supervisor, she is more likely to support programs that may be more beneficial for women (Ricucci & Meyers, 2004; Wilkins & Keiser, 2006). Although we do not find evidence supporting representative bureaucracy, our findings indicate that female supervisors who adopt supportive leadership roles may help decrease the discrepancy between telework eligibility and participation. The result implies that supervisor support and diversity management are more important than supervisor gender in reducing decoupling between eligibility and participation in telework programs. If an organization seeks to increase job satisfaction and organizational performance by relieving barriers to participation in telework programs, managers should focus on improving diversity management and supervisor support.

This study has practical implications for public employees. Whether being female supervisor is not associated with the decrease in nonparticipation in telework

programs of employees who are eligible and willing to telework, but both supportive leadership and diversity management are negatively associated with employees' non-participation in telework programs for which they are eligible. The findings of this study imply that, compared with innate features such as gender, organizational characteristics such as diversity management and supportive leadership play more important roles in reducing the nonparticipation of eligible employees in telework programs. We conclude, therefore, that organizations can eliminate factors that negatively affect organizational performance and work motivation by encouraging diversity management and supportive leadership.

The results of this study also show that female supervisors who practice supportive leadership can reduce the number of public employees who are unable to participate in existing telework programs. Although being a female supervisor is not associated with the reduction of the nonparticipation rate in eligible telework programs, we find that female supervisors who provide supportive leadership can reduce the likelihood of employees' nonparticipation in a telework program for which they are eligible. We believe that our study provides insights regarding the importance of supportive leadership in reducing decoupling between organizational eligibility and participation in telework.

Notwithstanding these significant findings, this study's limitations warrant attention. First, we cannot isolate causality between female supervisors, supportive leadership, and diversity management and organizational eligibility and participation in telework programs given the endogeneity among these variables. Thus, future studies that use longitudinal data and experimental research designs are recommended to establish causal relationships among these variables. Second, response biases may be present given the data are self-reported. Future research should aim to develop more rigorous measures of supportive leadership and diversity management.

Appendix

Correlation Variables.

	1	2	3	4	5	6	7
1. Eligible but not participating	1						
2. Female supervisor	.01	1					
3. Supportive leadership	-.03	.05	1				
4. Diversity management	-.02	.06	.71	1			
5. Minority	.01	.01	-.05	-.13	1		
6. Age	.02	.04	.01	-.01	-.06	1	
7. Agency experience	.02	.14	-.03	-.03	-.01	.44	1


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