

## EXPLORING JOB RESOURCES FOR FEMALE EMPLOYEES' JOB STRAIN: THE CASE OF U.S. FEDERAL EMPLOYEES

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### Abstract

It becomes critical to the success of organizations to figure out how to effectively remedy female employees' stress, given the sheer number of female employees in most organizations. The present study aimed to enhance our understanding of female employees' strain, and suggest job resources to reduce their stressful feelings at work. With a sample of U.S. federal employees, female employees were compared with male counterparts in terms of their satisfaction about diverse work environments and the effects of work environment on stressful feelings. According to the findings, the strain of female employees was significantly higher than that of male counterparts. Work-life balance became a significant job resource for both male and female employees. Some work environment factors, such as public support and relationship with outside organizations, showed different effect on job strain, depending on the gender.

**Keywords:** female employees, job resources, strain, employee stress, gender, stressful feelings.

## 1. Introduction

Stress can be described as physiological and psychological reactions to undue pressures and demands especially when individuals meet challenges that are beyond their capacities (Baker, 1985; Cummings and Cooper, 1979). Although stress itself is not necessarily unhealthy (Dhabhar, 2019; Folkman, 2008), employees may end up being a victim of stress at work if it is excessive or it is beyond employees' capability to deal with it (Baker, 1985; Jex and Gudanowski, 1992; Pearlin, 1989). Public employees are exposed to unique stressors such as goal ambiguity (Chun and Rainey, 2006), red tape (Bozeman, 1993), and a political nature of bureaucracy (Peters and Peters, 2002), in addition to common stressors across occupations and sectors such as work overload and role conflicts (Cooper, 1983; Fletcher, 1994). Furthermore, female employees usually experience higher job stress because they have worse psychosocial work conditions such as lower job control (Bond *et al.*, 2004; Vermeulen and Mustard, 2000), and they face greater performance pressure than male counterparts (Bellamy and Ramsay, 1994; Powell, 2018). Therefore, in addition to understanding major correlates of job stress among public employees, it also becomes critical to the success of public organizations to figure out how to effectively remedy female employees' stress, given the sheer number of female employees working in public organizations. As of 2016, the U.S. federal workforce consisted of 42% female employees and 58% male employees (see Table 1 in the finding section), based on the assumption that participants in the 2016 Merit Principles Survey (MPS) were the fair representatives of the actual federal employees. However, it is remarkable that there is a notable paucity of empirical research that was carried out to systematically examine job stress among female public employees. Due to insufficient research, our knowledge on job stress among female public employees is very limited.

Diversity management has become a primary theme of the diversity literature in public administration due to increased diversity in population and workforce in the U.S. (Pitts, 2009). Changing demographics in the United States, such as the growth in the number of female employees, increase the importance that managers should pay to recruiting, hiring, and retaining a more diverse workforce (Myers and Dreachslin, 2007; Wiley, 1992). Consequently, researchers (e.g., Choi, 2017; Pitts, 2009; Wise and Tschirhart, 2000) began to investigate whether or not workforce diversity would bring positive consequences (e.g., high performance and job satisfaction) to their organizations. While organizations can enjoy benefits such as a wider array of viewpoints, this diversified workforce may bring new challenges such as cultural misunderstandings as well as organizational factionalism (Dass and Parker, 1999; Okoro and Washington, 2012). Although the importance of diversity management and its consequences have long been recognized in the public sector, insufficient research has been undertaken with a focus on stress, and no systematic investigation was carried out to suggest how to effectively remedy stressful feelings among female public employees. Therefore, very little is known about how to alleviate stressful feelings among female public employees, except what researchers found outside of the public sector. It is surprising given that high stress would lead to low performance, burnout, and turnover

(Arshadi and Damiri, 2013; Baker, 1985; Cox, Kuk and Leiter, 1993; Lloyd, King and Chenoweth, 2002).

The present study seeks to enhance our understanding of female public employees' stress, and suggest possible ways to reduce their stressful feelings at work. More specifically, this study will find out effective ways to alleviate stressful feelings among female public employees by comparing female employees with male counterparts in terms of their satisfaction about stress and diverse work environments, and the effects of work environment on stressful feelings. The findings in this study would help to develop human resource management practices for female employees in public organizations, which will make female employees less stressful at work, and organizational performance will improve in the end.

## **2. Theoretical backgrounds**

### **2.1. Stress and strain**

There is no universal definition of stress because stress is an elusive concept to define. As Selye (1950) who is often referred to as the father of stress mentioned nobody really knows what stress is although we believe we know what that is. Anyhow, Selye generally defined stress as a non-specific response of the body to any demand, and explained how we respond to stress with the General Adaptation Syndrome (GAS). According to the GAS model that has three stages such as alarm, resistance, and exhaustion, we enter the alarm stage when we are exposed to a stressor (i.e., a cause of stress). If the stressor continues, we move on to the resistance stage. Finally, if we are exposed to the prolonged stressor, we can be exhausted and experience diverse negative consequences of stress. Stress and strain can be interchangeably used in common situations, but a growing body of literature paid attention to the effects of moderators on perceived strain such as emotional support (Jayaratne and Chess, 1984; Wright, 2012), coping resources (Osipow and Davis, 1988; Terry, Tonge and Callan, 1995), locus of control (Darshani, 2014; Haine *et al.*, 2003), and social support (Lefcourt, Martin and Saleh, 1984; Pengilly and Dowd, 2000). What these studies empirically found was that objective stressors did not lead to an equal level of strain in all situations. Rather, they argued that the individual perceptual filter plays a crucial role in determining actual feeling of stress (i.e., strain) and diverse moderators that influence the individual perceptual filter.

### **2.2. Job stress theories**

About four decades ago, scholars began to explain why job stress occurs to employees by suggesting some stress models. The Job Demand-Control Model (Karasek Jr., 1979; Karasek *et al.*, 1981), one of the first stress models, explains that employees' stressful feeling results from the combination of the level of job demand (i.e., stressors) and the level of job control such as decision-making latitude. According to this theory, if job demand is high for employees, but they are not allowed to make decisions on their own in most situations

– i.e., low decision-making latitude, they are more likely to experience high strain. However, even though job demand is high, employees are less likely to feel stressful if they are given the high level of decision-making latitude. Later this model was expanded by incorporating a social support element, and the Job Strain Model was suggested (Karasek and Theorell, 1990). In addition, the Effort-Reward Imbalance Model (Siegrist, Siegrist and Weber, 1986) explains workplace stress by focusing on whether or not employees' efforts are rewarded (or recognized) by their organization. According to this model, employees would be feeling stressful if they are not provided with rewards or recognition such as pay raise and promotion by their organizations, commensurate with their efforts at work.

Along with the Job Demand-Control Model and the Effort-Reward Imbalance Model, the Job Demand-Resources (JD-R) model has been widely adopted by researchers to explain job stress among employees (Schaufeli and Taris, 2014). Demerouti *et al.* (2001) originally developed the JD-R model to explain burnout among employees, and proposed that working conditions can be categorized into either job demands or job resources. According to Demerouti and colleagues, the examples of job demands are physical workload, time pressure, recipient contact, physical environment, and shift work, and job resources include feedback, rewards, job control, participation, job security, and supervisor support (p. 502). Bakker and Demerouti (2007) argued that job demands and resources interact and the consequences of the interaction can be either strain or motivation. The JD-R model provides feasible application to organizations in which reducing job demands may not be an option to most organizations because extra budget is needed (Schaufeli, 2015). For example, to reduce job demands for current employees, organizations may need to hire new employees, which requires additional budget. Rather than focusing on how to reduce job demands, the JD-R model suggests that an organization increase job resources to reduce stressful feeling among employees. In the JD-R model, any working conditions can be either job demands or job resources, both of which will affect employee wellbeing. However, notwithstanding the detailed definitions of job demands and resources (Demerouti *et al.*, 2001), the conceptual difference between job demands and resources is not clear enough, and the value-based nature of job demands and resources may need redefinition (Schaufeli and Taris, 2014). Generally speaking, job demands are negatively valued and job resources are positively valued aspects of a job or working conditions in the JD-R model.

### ***2.3. Job stress and female employees***

Traditionally, female employees are treated as minorities in most organizations (Cayer and Sigelman, 1980; Kim, 2004). Minorities can be defined as those who receive different treatment due to physical, social, or cultural differences (Wirth, 1941, p. 415). Therefore, female employees tend to experience social isolation and hostility (O'Farrell and Harlan, 1982), and it is generally predicted that job stress among female employees is higher than their male counterparts. According to Meyer (2003), job stress for minorities can be explained by a minority stress model that relied on several sociological and social psychological theories as a theoretical foundation. A minority stress model explains that minorities

work in extra stressful social environments because of stigma, prejudice, and discrimination. Kanter (1977) argued that any social group can be regarded as token if it comprises a small portion of a total group, and the tokenism is associated with some negative feelings such as being more visible and being more distinctive, compared to non-token members. When female employees comprise only a small portion of the total employees in an organization, their job stress would be positively more influenced by this feeling of difference or being visible (Milliken and Martins, 1996).

Regardless of minority status, it is argued that stress is affected by different mechanisms in males and females (Hall *et al.*, 1992; Niedhammer *et al.*, 1998), and males and females have different valued goals (Broidy and Agnew, 1997). Males' major concerns are extrinsic achievement and material success, whereas females are concerned with interpersonal relations and meaning in life. Therefore, males and females have different kinds of stressors (Broidy and Agnew, 1997). Generally speaking, female employees experience higher job stress than male counterparts because of a unique set of stressors (Bellamy and Ramsay, 1994; Davidson and Cooper, 1984; Spangler, Gordon and Pipkin, 1978) and worse psychosocial working conditions such as poor career opportunity and low job control (Bond *et al.*, 2004; Matthews *et al.*, 1998; Vermeulen and Mustard, 2000). It is also argued that females are more vulnerable to the effects of stress (Hodes and Epperson, 2019; Roxburgh, 1996). As explained in the methods section, public employees' actual feeling of stress is the dependent variable in this study. Public employees will have a higher level of strain when they have a lower level of satisfaction about job stress, regardless of actual levels of stressors.

*H1:* Female employees have a higher level of strain than male counterparts.

#### ***2.4. Work environments and female employees***

Work environments encompass a wide range of categories such as physical settings, job characteristics, and organizational culture/history (Briner, 2000). Female employees would prefer different work environments, compared to male counterparts, because they have a unique set of stressors (Bellamy and Ramsay, 1994; Davidson and Cooper, 1984; Spangler *et al.*, 1978) and different valued goals (Broidy and Agnew, 1997). Employees would be less likely to be stressful at work if they work in their preferred work environments.

In this study, the Merit Principles Survey 2016 Data was used and this data provided diverse aspects of work environments, which were categorized into five factors, using exploratory factor analysis. Those five factors are 'personal meaningfulness at work' (Factor 1), 'public perception and support' (Factor 2), 'work-life balance' (Factor 3), 'organizational culture/stability/goal attainability' (Factor 4), and 'relationships with other organizations' (Factor 5). More details about factor analysis will be explained later in the methods section. In this section, hypotheses are proposed about the effects of these extracted factors. As seen in hypotheses below, it is generally predicted that female employees would prefer different work environments, compared to male counterparts. One hypothesis is proposed for each extracted factor. However, three separate hypotheses are proposed (5-1, 5-2, and 5-3) for Factor 4 because this factor consists of more diverse aspects of work environments.

*H2:* The strain of female employees is differently affected by ‘personal meaningfulness at work’ (Factor 1), compared to that of male counterparts.

*H3:* The strain of female employees is differently affected by ‘public perception and support’ (Factor 2), compared to that of male counterparts.

*H4:* The strain of female employees is differently affected by ‘work-life balance’ (Factor 3), compared to that of male counterparts.

*H5-1:* The strain of female employees is differently affected by ‘organizational culture’ (Factor 4-1), compared to that of male counterparts.

*H5-2:* The strain of female employees is differently affected by ‘organizational stability’ (Factor 4-2), compared to that of male counterparts.

*H5-3:* The strain of female employees is differently affected by ‘goal attainability’ (Factor 4-3), compared to that of male counterparts.

*H6:* The strain of female employees is differently affected by ‘relationships with other organizations’ (Factor 5), compared to that of male counterparts.

### **3. Methods**

This study adopted ordinary least squares (OLS) regression analyses and t-tests to test hypotheses. OLS regression analyses were conducted to test if the strain of female employees is differently affected by work environments, compared to male counterparts. OLS regressions were run separately for male and female employees, then the effects of work environments were compared. T-tests were also run to compare the satisfaction level about job stress and diverse aspects of work environments between male and female employees.

Before conducting OLS regression and t-tests, exploratory factor analysis was run with 13 work environment variables to figure out underlying factors among them. The Merit System Protection Board (MSPB)’s 2016 Merit Principles Survey (MPS) data set ‘path 2’ was used in this study. MSPB has the statutory responsibility to assess the health of federal merit systems and the 2016 MPS data is the most recent data available to the public. The sample was drawn from 24 federal agencies, and 14,473 full-time civilian federal employees participated in the survey for the data set ‘path 2’ with 38.7% response rate (Merit System Protection Board, 2016). Among participants, 8,394 (58%) and 6,079 (42%) were male and female employees, respectively.

#### ***3.1. Major variables***

##### *3.1.1. Dependent variable*

In this study, public employees’ actual feeling of stress was used as a dependent variable, and it was measured by asking how satisfied they were with job stress (1: very dissatisfied, 5: very satisfied). As mentioned previously, it is assumed that public employees will have a lower level of strain when they have a higher level of satisfaction about job stress,

regardless of actual levels of stressors. That is, even though a person's objective stress level was high, the person did not have to experience the equal level of strain if the person had effective job resources as JD-R Model argues (Bakker and Demerouti, 2007). Researchers argue that perceptual filter plays a crucial role in determining actual feeling of strain, and the individual perceptual filter is affected by moderators such as emotional support (Jayaratne and Chess, 1984; Wright, 2012), and coping resources (Osipow and Davis, 1988; Terry *et al.*, 1995).

### *3.1.2. Independent variables*

Diverse aspects of work environments were used as independent variables. Survey participants were asked how satisfied they were with each of the work environments (1: very dissatisfied, 5: very satisfied). Exploratory factor analysis was conducted to identify underlying dimensions among 13 work environment variables. Before deciding how many factors would be attained, both eigenvalues and a eigenvalue scree plot were considered as methodologists suggested (Ferguson and Cox, 1993; Hayton, Allen and Scarpello, 2004). Only two factors showed greater than one in their eigenvalues (see Appendix 1 Table A), but the eigenvalue scree plot illustrated that the slope of the graph did not change much after the sixth factor. According to the guideline of the scree test (DeCoster, 1998; Yong and Pearce, 2013), it is recommended to attain all factors until the slope did not change much. Therefore, five factors were attained in this study (see Appendix 1 for more details). Below are attained factors and their component variables. A reasonable name was given to each extracted factor although the given factor names may not fully cover the meaning of all component variables in each factor. The detailed meaning of each variable can be found in Appendix 1 Table B.

Factor 1 (personal meaningfulness): e9, e16

Factor 2 (public perception and support): e1, e2

Factor 3 (work-life balance): e10, e12, e14, e15

Factor 4 (organizational culture and goal attainability): e3, e4, e6

Factor 5 (relationship with other organizations): e7, e8

Internal consistency or reliability of these five factors was also checked by computing Cronbach's alpha value. The Cronbach's alpha values for these five factors were between 0.76 and 0.91 (see Appendix 1 Table B for more details). According to the criteria for internal consistency (Cronbach, 1951; Nunnally, 1978), a set of variables is considered to have sufficient internal consistency or reliability when their Cronbach's alpha value is greater than 0.7.

### *3.1.3. Demographic variables*

Seven demographic variables were used in this study. For each variable, numbers were assigned as follows.

- (1) Years with current agency (d2)  
1: 3 years or less, 2: 4 years or more
- (2) Eligibility to retire (d3)  
0: not eligible, 1: eligible
- (3) Supervisory status (d4)  
1: non-supervisor, 2: team leader, 3: supervisor, 4: manager, 5: executive
- (4) Salary level (d10)  
1: \$74,999 or less, 2: \$75,000-\$99,999, 3: \$100,000-\$149,999, 4: \$150,000 or more
- (5) Racioethnicity (d11)  
0: non-minority, 1: minority
- (6) Gender (d12)  
0: male, 1: female
- (7) Age group (d15)  
1: 39 and under, 2: 40 and over
- (8) Education level (d16)  
1: less than AA degree, 2: AA or BA degree, 3: graduate degree
- (9) Telework status (d18)  
0: no telework, 1: telework

## 4. Findings

### 4.1. Descriptive statistics and correlations

As seen in Table 1, federal employees' satisfaction levels about work environments (e 11-e8) were between 3.15 (for e11: satisfaction level about job stress) and 4.00 (for e12: satisfaction level about geographic location of the workplace), and their average satisfaction level was close to somewhat satisfied (3.56 out of 5) – not shown in the table. Surprisingly, federal employees were least satisfied with their job stress level (e11), compared to satisfaction levels about other work environments, whereas their satisfaction level about work-life balance (Factor 3: e10, e12, e14, e15) was highest (mean: 3.79). Federal employees' satisfaction levels about other factors were 3.74 for personal meaningfulness (Factor 1: e9, e16), 3.32 for public perception and support (Factor 2: e1, e2), 3.42 for organizational culture/stability and goal attainability (Factor 4: e3, e4, e6), and 3.58 for relationships with other organizations (Factor 5: e7, e8). It seems that all factors (i.e., Factor 1 – Factor 5) were positively correlated with each other, and with satisfaction level about job stress. That is, if an employee was satisfied with one factor in work environments, the employee tended to be satisfied with other factors in work environments, and the satisfaction level about job stress would increase.

Most survey participants held team leader positions or higher managerial positions (mean of d4: 2.25), and worked in current agencies for more than 4 years (mean of d2:

**Table 1:** Summary statistics and correlations

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1. e11	3.15	1.25	1																						
2. e9	3.87	1.13	.42*	1																					
3. e16	3.60	1.17	.43*	.82*	1																				
4. e1	3.43	1.23	.29*	.33*	.33*	1																			
5. e2	3.21	1.29	.31*	.33*	.32*	.83*	1																		
6. e10	3.38	1.21	.76*	.46*	.47*	.31*	.32*	1																	
7. e12	4.00	1.15	.27*	.27*	.27*	.17*	.17*	.25*	1																
8. e14	3.87	1.14	.54*	.32*	.30*	.23*	.22*	.51*	.37*	1															
9. e15	3.89	1.21	.50*	.29*	.27*	.21*	.21*	.48*	.29*	.73*	1														
10. e3	3.47	1.25	.40*	.45*	.42*	.51*	.55*	.39*	.21*	.31*	.29*	1													
11. e4	3.24	1.31	.45*	.52*	.51*	.43*	.47*	.43*	.23*	.34*	.31*	.70*	1												
12. e6	3.54	1.15	.42*	.51*	.49*	.45*	.47*	.43*	.22*	.32*	.30*	.63*	.66*	1											
13. e7	3.58	1.11	.38*	.51*	.48*	.41*	.42*	.39*	.24*	.29*	.27*	.54*	.59*	.62*	1										
14. e8	3.58	1.03	.35*	.47*	.46*	.42*	.43*	.36*	.22*	.26*	.24*	.47*	.49*	.53*	.70*	1									
15. d2	1.91	.28	-.05*	.01	.01	-.02*	-.03*	-.03*	.05*	-.01	-.02*	-.03*	-.02*	-.03*	-.01	-.02*	1								
16. d3	.22	.41	.05*	.06*	.06*	.06*	.07*	.06*	.05*	.05*	.04*	.03*	.06*	.04*	.06*	.12*	.12*	1							
17. d4	2.25	1.29	-.02*	.17*	.19*	.05*	.05*	.01	.06*	-.05*	-.09*	.04*	.08*	.08*	.11*	.10*	.13*	.13*	1						
18. d10	2.52	1.03	.02*	.13*	.14*	.06*	.05*	.02*	.06*	.02*	-.00	.04*	.03*	.04*	.07*	.13*	.18*	.49*	.49*	1					
19. d11	0.33	.47	.03*	-.04*	-.02	.08*	.07*	.04*	-.03*	0.01	.01	.04*	.01	.03*	.02	.04*	-.04*	-.07*	-.09*	-.13*	1				
20. d12	0.42	.49	-.07*	-.01	-.01	-.01	-.03*	-.04*	.04*	0.02	.00	.02*	.00	.03*	.03*	.04*	-.01	-.05*	-.10*	-.12*	.10*	1			
21. d15	1.86	.35	.03*	.06*	.06*	.07*	.07*	.05*	.06*	.04*	.03*	.03*	.04*	.03*	.06*	.07*	.17*	.21*	.18*	.20*	.01	-.02	1		
22. d16	2.21	.73	.01	.03*	.04*	.02*	.02	-.03*	.01	.01	-.00	-.00	-.04*	-.01	-.01	.01	-.07*	.00	.17*	.40*	-.08*	-.06*	-.06*	1	
23. d18	.56	.50	-.01	.02*	.01	.02*	.02	-.03*	.02	.12*	.09*	.03*	.00	.01	.01	.02	.01	-.04*	.02	.30*	-.04*	.11*	-.03*	.21*	1

**Note:** \* p < 0.05. Meanings of work environment variables (e1-e15) and demographic variables (d2-d18) can be found in the Appendix 1, and in 3) demographic variables of the methods section, respectively.

1.91). Among survey participants, 58% were male and 42% were female employees (mean of d 12: 0.42), respectively, and non-minorities and racial/ethnic minorities were 67% and 33% (mean of d11: 0.33), respectively. Since d4, d2, and d12 were negatively correlated with satisfaction level about job stress (e 11), federal employees seemed to have a lower level of satisfaction about job stress when they held higher managerial positions, worked longer in the current agency, or if they were female. However, federal employees tended to have a higher level of satisfaction about job stress if they were eligible to retire (d3), if they had a higher salary level (d10), if they were racioethnic minorities (d11), or if they belonged to the older age group (d15). Education level (d16) and telework status (d18) did not show a significant correlation with satisfaction about job stress.

**4.2. Female employees’ satisfaction about job stress and work environments**

Satisfaction levels about job stress were compared between male and female employees, using t-tests. As seen in Table 2, female employees showed a significantly lower level of satisfaction about job stress than male employees. In other words, female employees showed a higher level of job stress as predicted in H1 (i.e., H1 was supported). That is, regardless

**Table 2:** T-tests results about satisfaction levels (males vs. females)

	Work environment	Males (mean)	Females (mean)	P-value
	Stress (e11)	3.23	3.05	***
Factor 1	Meaningful work (e9)	3.87	3.86	.71
	Pursuing particular calling (e16)	3.60	3.58	.50
Factor 2	Public support (e1)	3.44	3.41	.26
	Public perception (e2)	3.24	3.17	**
Factor 3	Workload (e10)	3.43	3.32	***
	Geographic location(e12)	3.96	4.05	***
	Meeting family responsibility (e14)	3.86	3.90	.10
	Taking time off (e15)	3.89	3.89	.69
Factor 4	Organization’s stability (e3)	3.45	3.51	*
	Organization’s culture (e4)	3.23	3.25	.64
	Goal attainability (e6)	3.52	3.58	**
Factor 5	Relationship with other orgs (e7)	3.55	3.62	**
	Relationship with outside orgs (e8)	3.54	3.64	***

+ p < 0.10, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

of actual stress level, female employees felt more stressful feeling than male counterparts. T-tests were also run to compare satisfaction levels about other work environments. It turned out that female employees showed a significantly higher level of satisfaction than male employees in factors 4 and 5 except e4 in Factor 4, and male and female employees showed a similar level of satisfaction in factors 1, 2, and 3. More specifically, there was no significant difference in satisfaction about Factor 1. Regarding Factor 2, there was no significant difference in satisfaction about public support (e1), and male employees showed a significantly higher level of satisfaction about public perception (e2) than female employees. Regarding Factor 3, there was no significant difference in satisfaction about meeting family responsibility (e14) and taking time off (e15). However, male employees showed a higher level of satisfaction about workload (e10) and female employees showed a higher level of satisfaction about geographic location (e12).

#### ***4.3. The effects of work environments on female employees' job strain***

OLS regression analyses were conducted to find out whether or not female employees were differently affected by work environments, compared to male counterparts. Variance inflation factor (VIF) was computed when regressions were run because there might be a multicollinearity issue due to high correlations among work environment variables and demographic variables (see Table 1). It turned out that the average VIF for both male and female data sets were 2.13 and 2.04, respectively. According to the suggested guideline (Mansfield and Helms, 1982; Miles, 2014), the multicollinearity does not exist in the regression analysis if average VIF value is less than 10.

As mentioned previously, OLS regressions were run separately for male and female employees, then the effects of work environments were compared. According to the regression results (see Table 3), the satisfaction level about job stress (i.e., strain) was similarly affected by Factor 1, regardless of gender (i.e., H2 was not supported). With respect to the effect of Factor 2, there was a significant difference between male and female employees. That is, when public support (e1) was high, female employees showed a lower level of satisfaction about job stress, whereas male employees' satisfaction level about job stress did not significantly change. However, public perception (e2) had significant and positive effect on job strain, regardless of gender. Therefore, H3 was partially supported. With respect to the effect of Factor 3, no different effects existed between male and female employees. That is, regardless of gender, public employees' satisfaction about job stress significantly increased when they were satisfied with workload (e10), geographic location (e12), meeting family responsibility (e14), or taking time off (e15). Therefore, H4 was not supported. With respect to the effect of Factor 4, no difference was found between male and female employees. That is, both male and females' satisfaction about job stress significantly increased when they were satisfied with organizational culture (e4). However, satisfaction about organization's stability (e3) and goal attainability (e6) did not have significant effect on the strain of either males or females. Therefore, none of H5-1, H5-2, and H5-3 was supported. The strain of male and female employees was differently affected by Factor 5. That is, only the strain of male employees significantly increased when they were satisfied

with ‘relationship with outside organizations’ (e8). However, relationship with other organizations (e7) had no significant effect on the strain, regardless of gender. Therefore, H6 was partially supported.

With respect to demographic factors, both male and female employees’ satisfaction about job stress decreased by supervisory status (d4). That is, as employees got promoted to higher positions, their job strain significantly increased, regardless of gender. Education level (d16) increased satisfaction about job stress for both male and female employees. That is, as employees had higher education level, they showed less strain, regardless of gender. However, age (d15) had a significant effect on only male employees’ job strain. That is, as employees became older, only male employees showed a low level of satisfaction about job stress.

**Table 3:** Regression analysis results (dependent variables: satisfaction level about job stress)

Factor category	Variables	Females only		Males only	
		Coefficients	S.E.	Coefficients	S.E.
Factor 1	Meaningful work (e9)	-.031	.021	-.013	.017
	Pursuing particular calling (e16)	.072***	.020	.039*	.017
Factor 2	Public support (e1)	-.041*	.019	-.027	.016
	Public perception (e2)	.047*	.018	.033*	.016
Factor 3	Workload (e10)	.616***	.013	.613***	.012
	Geographic location(e12)	.025*	.013	.026**	.010
	Meeting family responsibility (e14)	.146***	.017	.129***	.015
	Taking time off (e15)	.072***	.016	.090***	.013
Factor 4	Organization’s stability (e3)	.020	.016	.015	.013
	Organization’s culture (e4)	.077***	.016	.061***	.013
	Goal attainability (e6)	.005	.017	.021	.014
Factor 5	Relationship with other orgs (e7)	.013	.018	-.014	.015
	Relationship with outside orgs (e8)	-.018	.018	.046**	.015
Demographic factors	Years with current agency (d2)	-.059	.046	-.059	.038
	Eligibility to retire (eligible: 1) (d3)	-.007	.034	.025	.025
	Supervisory status (d4)	-.040**	.012	-.034***	.009
	Salary level (d10)	.023	.017	-.008	.013
	Racioethnicity (d11)	.024	.027	.020	.023
	Age group (d15)	-.037	.038	-.065*	.032
	Education level (d16)	.039*	.019	.039*	.016
	Telework status (telework: 1) (d18)	-.053	.029	-.011	.022
Number of observations		3,549		5,034	
R-squared		.647		.638	
F-value		308		421	

**Note:** unstandardized coefficients are displayed. \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

## 5. Discussion and conclusion

This study shed some light on stressful feelings among female employees by comparing their satisfaction levels about stress and preferred work environments with those of male employees. As predicted in H1, it turned out that female employees showed a lower level of satisfaction about job stress than male counterparts. Traditionally, the higher level of job strain was predicted for female employees because of social isolation and hostility (O'Farrell and Harlan, 1982), or feeling of difference (Kanter, 1977; Milliken and Martins, 1996) that female employees might feel as minorities. However, higher job strain for U.S. female federal employees may not be properly explained, based on the minority status because 42% of the survey participants were females in this study. Alternatively, female employees may have worse psychosocial working conditions such as poor career opportunity and low job control (Bond *et al.*, 2004; Matthews *et al.*, 1998; Vermeulen and Mustard, 2000), compared to male counterparts. Females may have different value goals (Broidy and Agnew, 1997), and females' stress may be affected by a different mechanism, compared to males (Hall *et al.*, 1992; Niedhammer *et al.*, 1998). Maybe female employees are more vulnerable to the effects of the same stress than male employees (Hodes and Epperson, 2019; Roxburgh, 1996).

The effects of work environment on job strain were mixed. That is, the strain of female employees was differently affected by some work environment factors, compared to that of male employees (see Table 3). Of five work environment factors, two factors showed partially different effects on job strain, depending on employees' gender. 'Personal meaningfulness at work' (Factor 2) showed a significant effect on job strain for only female employees, and 'relationships with other organizations' (Factor 5) had a significant effect on job strain for only male employees. More specifically, only female employees' job strain increased when public support was high, and only male employees' job strain decreased when relationship with outside organizations was satisfactory. It seems ironical that female employees felt more job strain when they are satisfied with public support because it should bring benefits such as alleviating stress if public support can be regarded as a social support (Baqutayan, 2011). Female employees may feel that they cannot meet the expectation of the public if public support is very high. This situation can be explained by the 'Red Queen effect' (Derfus *et al.*, 2008) in the business field. According to this effect, a firm must perform better and better to maintain its current market position, which is hard and even impossible. Therefore, female employees can be put under high pressure to meet increasing expectation from the public when public support is high. All variables in 'work-life balance' (Factor 3) showed significant and negative effects on job strain, regardless of employees' gender. That is, both male and female employees experienced decreased job strain when they were satisfied with workload, geographic location, meeting family responsibility, or taking time off. Based on the JD-R model (Bakker and Demerouti, 2007), this study found that some work environment variables (e16, e2, e10, e12, e14, e15, and e4) worked as job resources for both male and female employees, and other work environment variable (e8) became job resources for only male employees. Still, other work environment variable (e1) became job demand for only female employees.

With respect to the effects of demographic factors, of eight variables, only three variables (i.e., supervisory status, age, and education) showed significant effects on job strain. The effects of supervisory status and age were different from the prediction in the literature (Beatty, 1996; Jones, Bright and Clow, 2001; Karatepe and Karatepe, 2009; Spielberger *et al.*, 1981). That is, supervisory status showed a negative effect on the satisfaction about job stress for both male and female employees, and age showed a negative effect on the satisfaction about job stress for only male employees. It seems that as employees took higher managerial positions, they encountered more job demands than job resources, and felt more strain, regardless of gender. Only male employees showed significantly high strain as they became older. Education had a significant and positive effect on the satisfaction about job stress as predicted in the literature. That is, employees showed a higher level of job strain as they became more educated.

This study made some noteworthy contributions to the current literature. As one of the first systematic investigations about female employees' strain, this study filled the gap in the literature and suggested how to effectively manage female employees' strain, focusing on work environments. By identifying job resources for female employees and/or male employees, this study can help to develop effective human resource management practices, targeted to effectively reduce strain among female employees as well as among male employees in public organizations. Due to a comprehensive approach, this study also identified what demographic factors play a significant role in reducing female employees' stressful feeling. Despite contributions this study made, further research should be undertaken in diverse settings to advance our understanding of female employees' strain and generalize what this study found. Further research is also needed to answer why some work environments become job resources for both male and female employees and why other work environments become job resources or job demand for only male or female employees, not for both.

## References:

1. Arshadi, N. and Damiri, H., 'The Relationship of Job Stress with Turnover Intention and Job Performance: Moderating Role of OBSE', 2013, *Procedia-Social and Behavioral Sciences*, vol. 84, pp. 706–710.
2. Baker, D.B., 'The Study of Stress at Work', 1985, *Annual Review of Public Health*, vol. 6, no. 1, pp. 367–381.
3. Bakker, A.B. and Demerouti, E., 'The Job Demands-Resources Model: State of the Art', 2007, *Journal of Managerial Psychology*, vol. 22, no. 3, pp. 309–328.
4. Baqutayan, S., 'Stress and Social Support', 2011, *Indian Journal of Psychological Medicine*, vol. 33, no. 1, pp. 29–34.
5. Beatty, C.A., 'The Stress of Managerial and Professional Women: Is the Price Too High?', 1996, *Journal of Organizational Behavior*, vol. 17, no. 3, pp. 233–251.
6. Bellamy, P.A. and Ramsay, K., *Barriers to Women Working in Corporate Management*, Australian Government Publishing Service, 1994.

7. Bond, M.A., Punnett, L., Pyle, J.L., Cazeca, D. and Cooperman, M., 'Gendered Work Conditions, Health, and Work Outcomes', 2004, *Journal of Occupational Health Psychology*, vol. 9, no. 1, pp. 28–45.
8. Bozeman, B., 'A Theory of Government "Red Tape"', 1993, *Journal of Public Administration Research and Theory*, vol. 3, no. 3, pp. 273–304.
9. Briner, R.B., 'Relationships Between Work Environments, Psychological Environments and Psychological Well-Being', 2000, *Occupational Medicine*, vol. 50, no. 5, pp. 299–303.
10. Broidy, L. and Agnew, R., 'Gender and Crime: A General Strain Theory Perspective', 1997, *Journal of Research in Crime and Delinquency*, vol. 34, no. 3, pp. 275–306.
11. Cayer, N.J. and Sigelman, L., 'Minorities and Women in State and Local Government: 1973–1975', 1980, *Public Administration Review*, vol. 40, no. 5, pp. 443–450.
12. Choi, S., 'Workforce Diversity and Job Satisfaction of the Majority and the Minority: Analyzing the Asymmetrical Effects of Relational Demography on Whites and Racial/Ethnic Minorities', 2017, *Review of Public Personnel Administration*, vol. 37, no. 1, pp. 84–107.
13. Chun, Y.H. and Rainey, H.G., 'Consequences of Goal Ambiguity in Public Organizations', in Boyne, G.A., Meier, K.J., O'Toole, Jr.L.J., Walker, R.M. (eds.), *Public Service Performance*, Cambridge: Cambridge University Press, 2006, pp. 92–112.
14. Cooper, C.L., 'Identifying Stressors at Work: Recent Research Developments', 1983, *Journal of Psychosomatic Research*, vol. 27, no. 5, pp. 369–376.
15. Cox, T., Kuk, G. and Leiter, M.P., 'Burnout, Health, Work Stress, and Organizational Healthiness', in Schaufeli, W.B., Maslach, C. and Marek, T. (eds.), *Professional Burnout: Recent Developments in Theory and Research*, New York: Taylor & Francis, 1993, pp. 177–193.
16. Cronbach, L., 'Coefficient Alpha and the Internal Structure of Tests', 1951, *Psychometrika*, vol. 16, pp. 297–334.
17. Cummings, T.G. and Cooper, C.L., 'A Cybernetic Framework for Studying Occupational Stress', 1979, *Human Relations*, vol. 32, no. 5, pp. 395–418.
18. Darshani, R., 'A Review of Personality Types and Locus of Control as Moderators of Stress and Conflict Management', 2014, *International Journal of Scientific and Research Publications*, vol. 4, no. 2, pp. 1–8.
19. Dass, P. and Parker, B., 'Strategies for Managing Human Resource Diversity: From Resistance to Learning', 1999, *Academy of Management Perspectives*, vol. 13, no. 2, pp. 68–80.
20. Davidson, M.J. and Cooper, C.L., 'Occupational Stress in Female Managers: A Comparative Study', 1984, *Journal of Management Studies*, vol. 21, no. 2, pp. 185–205.
21. DeCoster, J., *Overview of Factor Analysis*, [Online] available at <http://www.stat-help.com/factor.pdf>, accessed on April 13, 2022.
22. Demerouti, E., Bakker, A.B., Nachreiner, F. and Schaufeli, W.B., 'The Job Demands-Resources Model of Burnout', 2001, *Journal of Applied Psychology*, vol. 86, no. 3, pp. 499–512.
23. Derfus, P.J., Maggitti, P.G., Grimm, C.M. and Smith, K.G., 'The Red Queen Effect: Competitive Actions and Firm Performance', 2008, *Academy of Management Journal*, vol. 51, no. 1, pp. 61–80.
24. Dhabhar, F.S., 'The Power of Positive Stress – A Complementary Commentary', 2019, *Stress*, vol. 22, no. 5, pp. 526–529.
25. Ferguson, E. and Cox, T., 'Exploratory Factor Analysis: A Users' Guide', 1993, *International Journal of Selection and Assessment*, vol. 1, no. 2, pp. 84–94.

26. Fletcher, B.C., 'The Epidemiology of Occupational Stress', in Cooper, C.L. and Payne, R. (eds.), *Causes, Coping and Consequences of Stress at Work*, John Wiley & Sons, 1994, pp. 3–50.
27. Folkman, S., 'The Case for Positive Emotions in the Stress Process', 2008, *Anxiety, Stress, and Coping*, vol. 21, no. 1, pp. 3–14.
28. Haine, R.A., Ayers, T.S., Sandler, I.N., Wolchik, S.A. and Weyer, J.L., 'Locus of Control and Self-Esteem As Stress-Moderators or Stress-Mediators in Parentally Bereaved Children', 2003, *Death Studies*, vol. 27, no. 7, pp. 619–640.
29. Hall, E., Johnson, J., Fredlund, P. and Theorell, T., 'Double Exposure: The Combined Impact of the Home and Work Environments on Mental Strain and Physical Illness', 1992, *International Journal of Health Services*, vol. 22, no. 2, pp. 239–260.
30. Hayton, J.C., Allen, D.G. and Scarpello, V., 'Factor Retention Decisions in Exploratory Factor Analysis: A Tutorial on Parallel Analysis', 2004, *Organizational Research Methods*, vol. 7, no. 2, pp. 191–205.
31. Hodes, G.E. and Epperson, C.N., 'Sex Differences in Vulnerability and Resilience to Stress Across the Life Span', 2019, *Biological Psychiatry*, vol. 86, no. 6, pp. 421–432.
32. Jayaratne, S. and Chess, W.A., 'The Effects of Emotional Support on Perceived Job Stress and Strain', 1984, *The Journal of Applied Behavioral Science*, vol. 20, no. 2, pp. 141–153.
33. Jex, S.M. and Gudanowski, D.M., 'Efficacy Beliefs and Work Stress: An Exploratory Study', 1992, *Journal of Organizational Behavior*, vol. 13, no. 5, pp. 509–517.
34. Jones, F., Bright, J. and Clow, A., *Stress: Myth, Theory and Research*, Pearson Education, 2001.
35. Kanter, R.M., 'Some Effects of Proportions on Group Life', in Carmen, E.H. and Rieker, P.P., *The Gender Gap in Psychotherapy*, Springer, 1977, pp. 53–78.
36. Karasek Jr., R.A., 'Job Demands, Job Decision Latitude, and Mental Strain: Implications for Job Redesign', 1979, *Administrative Science Quarterly*, vol. 24, no. 2, pp. 285–308.
37. Karasek, R., Baker, D., Marxer, F., Ahlbom, A. and Theorell, T., 'Job Decision Latitude, Job Demands, and Cardiovascular Disease: A Prospective Study of Swedish Men', 1981, *American Journal of Public Health*, vol. 71, no. 7, pp. 694–705.
38. Karasek, R. and Theorell, T., *Healthy Work: Stress, Productivity, and the Reconstruction of Working Life*, New York: Basic Books, 1990.
39. Karatepe, O.M. and Karatepe, T., 'Role Stress, Emotional Exhaustion, and Turnover Intentions: Does Organizational Tenure in Hotels Matter?', 2009, *Journal of Human Resources in Hospitality & Tourism*, vol. 9, no. 1, pp. 1–16.
40. Kim, C.K., 'Women and Minorities in State Government Agencies', 2004, *Public Personnel Management*, vol. 33, no. 2, pp. 165–180.
41. Lefcourt, H.M., Martin, R.A. and Saleh, W.E., 'Locus of Control and Social Support: Interactive Moderators of Stress', 1984, *Journal of Personality and Social Psychology*, vol. 47, no. 2, pp. 378–389.
42. Lloyd, C., King, R. and Chenoweth, L., 'Social Work, Stress and Burnout: A Review', 2002, *Journal of Mental Health*, vol. 11, no. 3, pp. 255–265.
43. Mansfield, E.R. and Helms, B.P., 'Detecting Multicollinearity, 1982, *The American Statistician*, vol. 36, no. 3a, pp. 158–160.
44. Matthews, S., Hertzman, C., Ostry, A. and Power, C., 'Gender, Work Roles and Psychosocial Work Characteristics as Determinants of Health', 1998, *Social Science & Medicine*, vol. 46, no. 11, pp. 1417–1424.

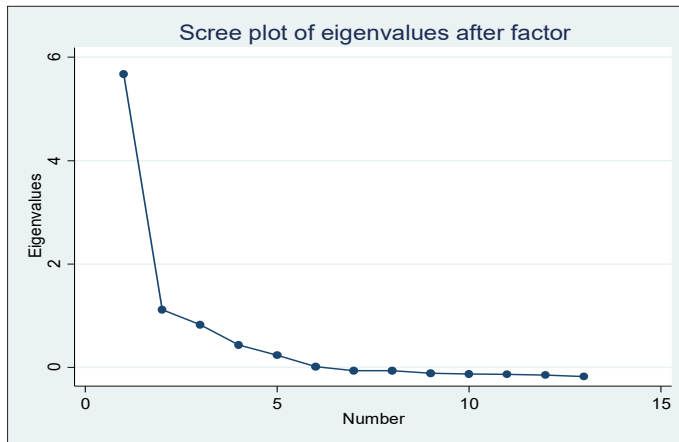
45. Merit System Protection Board, *Merit Principles Survey Data 2016 Methodology and Material*, 2016, [Online] available at [https://www.mspb.gov/foia/Data/MSPB\\_MPS2016\\_MethodologyMaterials.pdf](https://www.mspb.gov/foia/Data/MSPB_MPS2016_MethodologyMaterials.pdf), accessed on April 2, 2022.
46. Meyer, I.H., 'Prejudice, Social Stress, and Mental Health in Lesbian, Gay, and Bisexual Populations: Conceptual Issues and Research Evidence', 2003, *Psychological Bulletin*, vol. 129, no. 5, pp. 674–697.
47. Miles, J., 'Tolerance and Variance Inflation Factor', *Wiley StatsRef: Statistics Reference Online*, 2014.
48. Milliken, F.J. and Martins, L.L., 'Searching for Common Threads: Understanding the Multiple Effects of Diversity in Organizational Groups', 1996, *Academy of Management Review*, vol. 21, no. 2, pp. 402–433.
49. Myers, V.L. and Dreachslin, J.L., 'Recruitment and Retention of A Diverse Workforce: Challenges and Opportunities', 2007, *Journal of Healthcare Management*, vol. 52, no. 5, pp. 290–298.
50. Niedhammer, I., Goldberg, M., Leclerc, A., Bugel, I. and David, S., 'Psychosocial Factors at Work and Subsequent Depressive Symptoms in the Gazel Cohort', 1998, *Scandinavian Journal of Work, Environment & Health*, vol. 24, no. 3, pp. 197–205.
51. Nunnally, J.C., *Psychometric Theory*, New York: McGraw-Hill, 1978.
52. O'Farrell, B. and Harlan, S.L., 'Craftworkers and Clerks: The Effect of Male Co-worker Hostility on Women's Satisfaction with Non-traditional Jobs', 1982, *Social Problems*, vol. 29, no. 3, pp. 252–265.
53. Okoro, E.A. and Washington, M.C., 'Workforce Diversity and Organizational Communication: Analysis of Human Capital Performance and Productivity', 2012, *Journal of Diversity Management (JDM)*, vol. 7, no. 1, pp. 57–62.
54. Osipow, S.H. and Davis, A.S., 'The Relationship of Coping Resources to Occupational Stress and Strain', 1988, *Journal of Vocational Behavior*, vol. 32, no. 1, pp. 1–15.
55. Pearlin, L.I., 'The Sociological Study of Stress', 1989, *Journal of Health and Social Behavior*, vol. 30, no. 3, pp. 241–256.
56. Pengilly, J.W. and Dowd, E.T., 'Hardiness and Social Support as Moderators of Stress', 2000, *Journal of Clinical Psychology*, vol. 56, no. 6, pp. 813–820.
57. Peters, B.G. and Peters, G., *Politics of Bureaucracy*, Routledge, 2002.
58. Pitts, D., 'Diversity Management, Job Satisfaction, and Performance: Evidence from US Federal Agencies', 2009, *Public Administration Review*, vol. 69, no. 2, pp. 328–338.
59. Powell, G.N., *Women and Men in Management*, London: Sage Publications, 2018.
60. Roxburgh, S., 'Gender Differences in Work and Well-Being: Effects of Exposure and Vulnerability', 1996, *Journal of Health and Social Behavior*, vol. 37, no. 3, pp. 265–277.
61. Schaufeli, W.B., 'Engaging Leadership in the Job Demands-Resources Model', 2015, *Career Development International*, vol. 20, no. 5, pp. 446–463.
62. Schaufeli, W.B. and Taris, T.W., 'A Critical Review of the Job Demands-Resources Model: Implications for Improving Work and Health', 2014, *Bridging Occupational, Organizational and Public Health*, pp. 43–68.
63. Selye, H., *Stress: The Physiology and Pathology of Exposure to Stress*, ACTA Publications, Montreal, 1950.

64. Siegrist, J., Siegrist, K. and Weber, I., 'Sociological Concepts in the Etiology of Chronic Disease: The Case of Ischemic Heart Disease', 1986, *Social Science & Medicine*, vol. 22, no. 2, pp. 247–253.
65. Spangler, E., Gordon, M.A. and Pipkin, R.M., 'Token Women: An Empirical Test of Kanter's Hypothesis', 1978, *American Journal of Sociology*, vol. 84, no. 1, pp. 160–170.
66. Spielberger, C.D., Westberry, L.G., Grier, K.S. and Greenfield, G., *The Police Stress Survey: Sources of Stress in Law Enforcement*, National Institute of Justice: Washington, DC, 1981.
67. Terry, D.J., Tonge, L. and Callan, V.J., 'Employee Adjustment to Stress: The Role of Coping Resources, Situational Factors, and Coping Responses', 1995, *Anxiety, Stress & Coping*, vol. 8, no. 1, pp. 1–24.
68. Vermeulen, M. and Mustard, C., 'Gender Differences in Job Strain, Social Support at Work, and Psychological Distress', 2000, *Journal of Occupational Health Psychology*, vol. 5, no. 4, pp. 428–440.
69. Wiley, C., 'Recruiting Strategies for Changing Times', 1992, *International Journal of Manpower*, vol. 13, no. 9, pp. 13–13.
70. Wirth, L., 'Morale and Minority Groups', 1941, *American Journal of Sociology*, vol. 47, no. 3, pp. 415–433.
71. Wise, L.R. and Tschirhart, M., 'Examining Empirical Evidence on Diversity Effects: How Useful Is Diversity Research for Public-Sector Managers?', 2000, *Public Administration Review*, vol. 60, no. 5, pp. 386–394.
72. Wright, K.B., 'Emotional Support and Perceived Stress Among College Students Using Facebook.com: An Exploration of the Relationship Between Source Perceptions and Emotional Support', 2012, *Communication Research Reports*, vol. 29, no. 3, pp. 175–184.
73. Yong, A.G. and Pearce, S., 'A Beginner's Guide to Factor Analysis: Focusing on Exploratory Factor Analysis', 2013, *Tutorials in Quantitative Methods for Psychology*, vol. 9, no. 2, pp. 79–94.

## Appendix 1. Factor analysis of work environments

**Table A:** Eigenvalues and explained proportion of variance

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor 1	5.68	4.55	.76	.76
Factor 2	1.12	.29	.15	.90
Factor 3	.82	.39	.11	1.01
Factor 4	.44	.20	.06	1.07
Factor 5	.24	.23	.03	1.10



**Figure A:** Scree plot of eigenvalues after factor analysis

**Table B:** Factor loadings and alpha values for five factors

	Variable	Factor Loading	Alpha
Factor 1: Personal meaningfulness	Satisfaction: Your opportunity to pursue a particular purpose or calling through work (e16)	.80	.90
	Satisfaction: Your opportunity to do work that you find meaningful (e9)	.79	
Factor 2: Public perception and support	Satisfaction: Public perception of your organization's performance (e2)	.84	.91
	Satisfaction: Public support for your organization's mission and work (e1)	.83	
Factor 3: Work-life balance	Satisfaction: Your ability to meet your work and family responsibilities (e14)	.79	.76
	Satisfaction: Your ability to take time off or 'get away' from work (e15)	.76	
	Satisfaction: Your workload (e10)	.47	
Factor 4: Org culture Org stability Goal attainability	Satisfaction: Your geographic location (e12)	.35	.85
	Satisfaction: Your organization's culture (e4)	.62	
	Satisfaction: Your organization's stability (e3)	.59	
Factor 5: Relationship with other organizations	Satisfaction: Attainability of your organization's goals and objectives (e6)	.52	.82
	Satisfaction: Working relationships with other organizations within your agency (e7)	.59	
	Satisfaction: Working relationships with Federal Government organizations outside of your agency (e8)	.58	