

WORK-FAMILY CONFLICT AND ITS RELATIONSHIP WITH JOB SATISFACTION AND PSYCHOLOGICAL DISTRESS: THE ROLE OF AFFECT AT WORK AND GENDER

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Abstract: The research presented in this paper examined the relationships between work-family conflict (WFC), affect at work, and gender and tested whether positive and negative affect mediate WFC effects on job satisfaction and psychological distress in and outside the work settings. Study 1 involved 365 married teachers in the public education sector and Study 2 involved 166 married employees in the private sector. Participants completed measures of work-family conflict, positive and negative affect at work, job satisfaction, and psychological distress at work (Study 1 only) and generally. As expected, WFC was associated with lower levels of positive affect and job satisfaction and higher levels of negative affect and also psychological distress in and outside work. Results from hierarchical regression analyses and mediation tests showed that affect at work mediated effects of WFC on job satisfaction and psychological distress in and outside the work environment. Women reported higher levels of overall WFC and family to work conflict in particular but there was no evidence for differential effects of WFC between men and women. These findings point to the role of affect as an important aspect of the work experience and for understanding the effects of family- and work-role conflict in work outcomes and psychological distress.

Key words: Affect at work, Gender differences, Work-family conflict.

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In the beginning of the 21st century balancing between work and family demands is becoming an increasingly important issue for employees and their families. The changes that have taken place the last decades in the roles of working men and women, especially in societies where the adoption of modernity is more recent (Giddens, 1991), have been significant. For example, the increase in the percentage of women entering the work force has affected the ways that married men and women organize life. One of the consequences of these changes has been the lifting of the strict segregation of roles between workers and non-workers and the consequent increase in work-home conflict (Geurts & Demerouti, 2003).

Work-family interference or conflict (WFC) refers to a state of affairs where the work and family domains interfere with one another to such a degree that the one is influencing negatively the other (Greenhaus & Beutell, 1985). The (American) National Institute for Occupational Safety and Health (NIOSH) considers work-family conflict as one of the 10 most significant stressors at work (Kelloway, Gottlieb, & Barham, 1999). Existing research has focused on the consequences of WFC on stress or stress-related factors at work and a number of studies have found consistent evidence that WFC is associated with indicators of job satisfaction and well-being (for reviews see Allen, Herst, Bruck, & Sutton, 2000; Kossek & Ozeki, 1998). However, despite the strong interest on the links between WFC and affective aspects of working life (stress-related), to our knowledge, there has been no published study that assessed directly positive and negative affect at work among the possible factors associated with WFC.

The study of positive and negative affect at work is an important emerging topic in organizational behavior research (Ashkanasy, Härtel, & Zerbe, 2000; Barsade, Brief, & Spataro, 2003) and it can help understand the processes underlying the negative effects of WFC on work outcomes and generally on individuals' psychological states. For example, in a recent critical review, Parasuraman and Greenhaus (2002) point out that the work-family conflict literature has overemphasised distress and negative emotions. By looking at positive as well as negative affect one may form a more complete view of the processes at hand also since the two aspects of emotion are to a large extent independent (e.g., Egloff, 1998; Fredrickson, 1998). A recent study on WFC and burnout in middle managers also pointed to the need to measure positive concepts in the work environment to evaluate the effects of WFC (Montgomery, Peeters, Schaufeli, & Den Ouden, 2003). Therefore, the main aim of the present studies was to

examine links between WFC and both positive and negative affect at work and to further test whether affective elements of the work experience mediate the adverse effects of WFC within or outside work.

Despite the lack of information on relationships between WFC and affect at work, there is ample evidence for the negative effects of WFC on psychological factors at work: burnout (Netemeyer, Boles, & McMurrian, 1996), stress at work (Bacharach, Bamberger, & Conley, 1991) and job satisfaction (Kossek & Ozeki, 1998). Burnout has been one of the most studied stress-related psychological consequences of WFC; WFC has been found associated with high levels of depersonalisation and lower levels of personal accomplishment (Kinnunen & Mauno, 1998; Netemeyer et al., 1996; Russel, Altmaier, & Van Velzen, 1987). Furthermore, research has established strong links between work-family conflict and global well-being. For example, a study by O'Driscoll, Ilgen, and Hildreth (1992) has found positive associations between work and family conflict and psychological distress using the General Health Questionnaire. Other studies using both cross-sectional and longitudinal research designs found strong links between WFC and psychological well-being (Parasuraman, Purohit, Godshalk, & Beutell, 1996), and general life stress and anxiety (Frone, Russell, & Cooper, 1997; Kelloway et al., 1999).

In all these studied outcomes of WFC there are important affective components also since affect at work constitutes a key facet of the work experience and therefore a potentially important part of the process that links work-family role conflict to adverse outcomes at work and generally. For example, positive and negative affect has been found to predict perceptions of job stress and burnout among several aspects of organizational behavior (Brief, Burke, George, Robinson, & Webster, 1988; Barsade, Brief, & Spataro, 2003). According to Maslach and Jackson (1986), affective reactions are central to the burnout syndrome and its three underlying dimensions: emotional exhaustion, depersonalisation and reduced accomplishment. Furthermore, affective reactions in the work setting were initially thought as proxies of job satisfaction (e.g., Locke, 1976) but it has been empirically demonstrated that job satisfaction involves both cognitive and affective components (Brief & Robertson, 1989). One of the central emotion theories of organizational behavior (Affect Events Theory: Weiss & Cropanzano, 1996) suggests that antecedent events at work lead to affective states that, in turn, can influence job satisfaction (see also Brief, Butcher, & Roberson, 1995; Brief

& Weiss, 2002). There are different accounts of the motivational, social and cognitive processes at work that attempt to explain why affect (and especially positive affect) may facilitate organizational behavior outcomes (see Wright & Staw, 1999) but this article does not distinguish among these different accounts. Instead, we followed a broad definition of affect as a “subjective feeling state” that can include mood, dispositional affect and emotions (Ashforth & Humphrey, 1995) in order to test whether affect at work is a significant mediator of WFC effects on job satisfaction and psychological distress at work and generally.

Another aim of the research reported in this article was to examine the role of gender differences in the links between WFC and affect at work, job satisfaction and psychological distress since gender has been singled out as an important variable in WFC research. Initially, it was thought that since working women are called to adopt a variety of roles (as mothers, workers, wives, daughters etc.) they may also experience greater conflict among these roles (e.g., they will have to devote more time in the family) and therefore they may experience more psychological distress than men (Pleck, 1977). This hypothesis stems from gender role theory that sees men and women adopting different patterns in the amount of time and energy they devote to work and family life (Parasuraman & Simmers, 2001). Initial evidence supported this hypothesis (e.g., Greenhaus & Beutell, 1985; Gutek, Searle, & Klepa, 1991; Wiersma, 1990) with some studies elaborating further that women experience more family to work than work to family conflict (Frone et al., 1992b). However, there is also evidence that gender does not affect either the absolute level of work-family conflict reported by working married men and women or their effects on other psychological variables in the work and family domains (Blanchard-Fields, Chen, & Hebert, 1997; Duxbury & Higgins, 1991; Eagle, Miles, & Icenocle, 1997; Frone & Rice, 1987; Wallace, 1997). According to Parasuraman and Greenhaus’ (2002) recent review, research on gender differences in the work-family relationships may have been too narrow, focusing extensively on the main effects of gender on work-family conflict. To that effect, the present studies looked also into the different effects of WFC on the said psychological outcomes in men and women.

Finally, alongside the measurement of general levels of WFC, the research reported here aimed to distinguish directional effects between conflict from work to family (WFC) and from family to work (FWC) and their relationships with the psychological outcomes. In keeping with the

main idea of conflict in work and family roles, there have been numerous studies that document the directional aspect of work-family conflict (e.g., Adams, King, & King, 1996; Frone, Russell, & Cooper, 1992a, b; Greenhaus, Callanan, & Godshalk, 1997; Gutek et al., 1991; O'Driscoll et al., 1992). This research has demonstrated that the two dimensions of WFC are largely interdependent (mainly through exploratory factor analysis) and that WFC is generally more prevalent than FWC (suggesting that family life is more susceptible to work role effects than the other way round). One of the limitations of this work as pointed out by Carlson and Frone (2003) is that the psychological and behavioral aspects of the role interference have not been well understood and studied. Therefore, in addition to assessing general levels of work-family conflict in both studies, the second study also included a scale that distinguished directional effects of WFC and allowed to discriminate between psychological and behavioral aspects of WFC and FWC. Behavioral elements of conflict refer to situations where demands in one role prohibit participation in the other role; psychological elements of WFC have to do with concerns with one role that do not allow to psychologically engage fully with the other role.

Aims - Hypotheses

The two studies presented in this article focused on the role of affect at work and gender in the links between WFC and job satisfaction in stress-related factors at work and general well-being. The two studies aimed to: (a) examine the relationships between WFC and positive and negative affect at work, job satisfaction and psychological distress at work and generally; (b) to test whether affect at work constitutes an important mediator of WFC effects on job satisfaction and psychological distress at work and generally; and (c) to test whether there are gender differences in the level of WFC experienced but also whether the psychological outcomes are differentially affected by men's and women's WFC experiences.

In addition to examining these questions, Study 2 tested the validity of a relatively new measure of directional WFC in the Greek population. This new measure distinguishes between work to family and family to work conflict and also between behavioral and psychological aspects of WFC. Finally, we decided to apply these questions to both public and private sectors, since the topic of WFC has been very little researched in occupational sectors in Greece.

Based on the information reviewed in the introduction we had the following hypotheses:

1. We expected that WFC would be associated with higher levels of negative affect at work, burnout, and psychological distress, and with lower levels of job satisfaction and positive affect at work (Hypothesis 1).

2a. Given the expected association between WFC and affect at work in Hypothesis 1 and established links between affect at work, job satisfaction, and psychological distress, we expected that affect at work will mediate the WFC effects on job satisfaction and psychological distress (Hypothesis 2a).

2b. In line with evidence for the directional effects of WFC (e.g., Frone et al., 1992b) we expected that affect at work will be primarily associated with work to family conflict than family to work conflict. We did not have any expectations as to whether affect at work would mediate behavioral or psychological aspects of WFC (Hypothesis 2b).

3. Following gender role theory we expected that women would report higher levels of WFC than men and that this would be particularly evident in the private sector given the nature of the occupational pressures. We did not have any expectations as to whether WFC would differentially affect the psychological outcomes in men and women (Hypothesis 3).

STUDY 1

Method

Sample. The sample came from a larger study of 485 teachers from 22 public secondary and primary education schools from northern, central and southern Greece. Of them, we selected 365 participants who conformed to the criteria reported in Frone et al. (1992b) for the study of work-family conflict; namely, participants should: (a) work for at least 20 hours per week, and (b) be married or cohabiting, or have children at home, or (c) all these together. Participants were between 24 and 60 years of age ($M = 43$ years, $SD = 9.07$). The vast majority (88.2%) of the sample were married, 10.4% divorced and 1.4% had lost their partner, while 92% had at least one child, 22.8% one child, 59.6% two children, 7.4% three children, and 2.2% four children. There was an equal amount of participants from each education level, the average work experience was 14.7 years and the average income was 16200 euros per annum. The

collection of the data was carried out by post-graduate students who acted as research assistants.

Measures. All scales not previously adapted into Greek were translated into Greek by the author, blindly back-translated by a Greek graduate student with some items modified to enhance the naturalism of the translations (van de Vijver & Leung, 1997).

General work-family conflict. To assess general levels of work-family conflict we used 8 items from the Inventory of Work-Family Conflict (IWFC; Greenhaus, Callanan, & Godshalk, 2000). The IWFC assesses levels of general work-family conflict with an equal number of items positively and negatively worded, for example: "I believe that I successfully combine my role as worker and husband/wife" and "I do not have enough time to carry out my job and also to bring up my kids as I want". Items were rated on a 5-point scale (1 = totally disagree, 5 = totally agree). In half of the items the scoring was reversed so that the total score denoted that the person experienced high levels of work-family conflict. The scale reliability was satisfactory (Cronbach's $\alpha = .71$).

Positive and negative affect at work. To assess affect at work we used the Job Affect Scale (Brief et al., 1988). The scale consists of 20 emotion adjectives assessing participants' positive and negative affect at work during the previous week on a 5-point scale (1 = not at all, 5 = very much). In the present study we used 17 of these adjectives adapted in Greek: nine positive (JAS-PA: active, excited, enthusiastic, calm, happy, energetic, relaxed, at rest, strong¹) and eight negative affective states (JAS-NA: distressed, fearful, sad, scornful, hostile, nervous, sleepy, placid). The positive and negative affect parts of the scale had satisfactory internal consistency (Cronbach's alphas were .75 and .77, respectively).

Job satisfaction. To measure job satisfaction we adapted into Greek 12 items of the General Index of Job Satisfaction (Brayfield & Rothe, 1951). The scale included items such as: "I am generally satisfied with my current job", "I consider my job rather unpleasant". The internal consistency of the scale was good (Cronbach's $\alpha = .88$).

Psychological distress. The General Health Questionnaire (GHQ; Goldberg, 1978) was used to assess general psychological distress. The scale

1. Active/drastirios, excited/ sineparmenos, distressed/ neurikos, enthusiastic/ enthousiasmenos, calm/ halaros, fearful/fovismenos, happy/ haroumenos, sad/ lipimenos, scornful/ perifrontitikos, energetic/ gematos energia, hostile/ ehthrikos, relaxed/ iremos, nervous/ eknevrismenos, sleepy/ Nistagmenos, at rest/galinios, placid/ adranis, strong/ dynatos.

has been translated by the author, blindly back-translated by a Greek graduate student, with some items modified to enhance the naturalism of the translations; it was used in several studies thus far (Kafetsios & Sideridis, 2006; Καφέτσιος & Ιωαννίδου, 2004). The scale (20 item version) measures the participant's current mental health. The scale assesses depression, state anxiety, somatic symptoms and social dysfunction. Items concern situations with which the individual had to cope over the last few weeks that influenced their psychological health. The internal consistency of the scale was satisfactory (Cronbach's $\alpha = .81$).

Burnout. The Greek version of the Maslach Burnout Inventory (MBI Maslach & Jackson, 1986; Greek version: Αναγνωστόπουλος & Παπαδάτου, 1992) consists of 22 items that measure the three dimensions of emotional exhaustion, depersonalisation and personal accomplishment. The emotional exhaustion (EE) dimension (9 items) assesses feelings of emotional vulnerability and exhaustion by one's work. The depersonalisation (DP) dimension (5 items) assesses impersonal response toward the objects of one's work. The personal accomplishment (PA) dimension (8 items) assesses feelings of competence and successful achievement related to one's work. High scores in the EE or DP scales, or low scores in the PA scale, indicate high levels of burnout. The scales' internal consistency scores were $\alpha = .70$ (emotional exhaustion), $\alpha = .60$ (depersonalisation), and $\alpha = .61$ (personal accomplishment).

Results

Associations between WFC (predictor), affect at work (proposed mediator) and outcome variables. Table 1 presents the zero order correlations among the study's main variables (WFC, job satisfaction, affect at work, psychological distress, and burnout). General WFC had a negative association with positive affect ($r = -.14, p < .05$) and was positively associated with psychological distress ($r = .12, p < .05$) and emotional exhaustion ($r = .29, p < .05$). Interestingly, positive and negative affect, the proposed mediators in the associations between WFC and job satisfaction and psychological distress outcomes, had strong associations with all outcome variables. With regards to gender differences, women reported higher levels of general WFC but also higher job satisfaction, lower levels of depersonalisation and higher levels of personal accomplishment. Therefore, possible gender differences with regards to those outcomes and associations between gender and WFC were explored in the hierarchical multiple regressions that are presented in Table 2.

Table 1. Zero order correlations between STUDY 1 main variables

	Mean (SD)	1	2	3	4	5	6	7	8	9	10
1. Gender		1.00									
2. Age	43 (9.07)	-.19**	1.00								
3. WFC	3.33 (.71)	.17**	-.11*	1.00							
4. Positive affect	1.69 (.58)	.07	.16**	-.14*	1.00						
5. Negative affect	3.81 (.60)	-.04	-.26**	.10	-.55**	1.00					
6. Job satisfaction	1.86 (.40)	.14**	.17**	-.09	.55**	-.57**	1.00				
7. Psychological distress	1.56 (.85)	.04	-.02	.12*	-.37**	.31**	-.22**	1.00			
8. MBI Emotion exhaustion	.94 (1.21)	-.02	-.19**	.29**	-.40**	.50**	-.51**	.30**	1.00		
9. MBI Depersonalization	4.6 (1.19)	-.14**	-.15**	.08	-.36**	.48**	-.48**	.09	.48**	1.00	
10. MBI Accomplishment	3.2 (.62)	.12*	.20**	-.01	.37**	-.44**	.48**	-.14**	-.32**	-.45**	1.00

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.

Testing for positive and negative affect at work mediation. Table 2 presents the results from hierarchical regression analyses in two steps to test for the mediating effects of affect at work in the associations between WFC and job satisfaction and psychological distress. According to Baron and Kenny (1986) mediation is present if: (a) the predictor, mediator and outcome variables are significantly related and (b) there is a reduction in the effect of the predictor on the outcome variable after controlling for the mediator (see Table 2 column β^t). In addition, formal tests of significance of the mediation were carried using the Sobel test (Preacher & Hayes, 2004). In the case of job satisfaction, positive affect at work was a significant mediator of WFC, $z = 1.87$, $p = .06$ and of age effects, $z = 2.80$, $p < .01$, but not of gender, $z = .83$, *ns*. In the case of psychological distress, emotional exhaustion and depersonalization, positive affect (but not negative affect) was a significant mediator of WFC effects on psychological distress, $z = -2.37$, $z = -2.37$, $z = -2.38$, all $p < .05$.

In a separate analysis the interaction term of gender and work-family conflict was entered (after centering, see Aiken & West, 1991) and entered in the first step. In no case was the interaction term a significant predictor of the outcome variables.

Conclusion

The purpose of the first study was to test hypotheses about the relationships among overall WFC, affect at work and work satisfaction and distress. The results from this study revealed that positive and negative affect are related to WFC and to the studied outcomes in the work setting

Table 2. Testing positive and negative affect mediation between WFC and job satisfaction, psychological distress, and burnout

	Job satisfaction		Psychological distress		Emotional exhaustion		Depersonalization		Accomplishment			
	Step 1 (β^1)		Step 2 (β^1)		Step 1 (β^1)		Step 2 (β^1)		Step 1 (β^1)		Step 2 (β^1)	
	β^1	SE	β^1	SE	β^1	SE	β^1	SE	β^1	SE	β^1	SE
Sex	0.23**	0.14**	0.02	0.08	-0.09	-0.02	-0.20***	-0.14**	0.20**	0.13		
Age	0.23**	0.08	0.01	0.10	-0.17**	-0.04	-0.18**	-0.07	0.25**	0.14		
Educational level	0.09 [^]	0.02	0.01	0.06	-0.10 [^]	-0.05	-0.16**	-0.11*	0.03	-0.03		
WFC	-0.11 [^]	-0.02	0.10	0.05	0.27***	0.21***	0.11*	0.06	-0.03	0.03		
Positive affect	0.32***			-0.29***		-0.15**		-0.11*		0.18**		
Negative affect	-0.37***			0.19***		0.38***		0.37**		-0.31***		
R ²	0.11		0.01	0.18	0.12	0.32	0.11	0.28	0.09	0.25		
R ² change		0.33		0.16		0.20		0.17		0.17		
F Change		89.16***		30.42***		45.24***		36.92***		34.45***		

Note: MBI = Maslach Burnout Inventory. [^] $p < .10$ * $p < .05$ ** $p < .01$, *** $p < .001$; β^1 = standardized beta when variable entered in first step; β^2 = final beta after positive and negative affect were entered in second step (N = 365).

and generally. Consistent with Hypothesis 2a, positive *and* negative affect were found to be significant mediators of WFC effects on job satisfaction, burnout and psychological distress. Specifically, affect at work fully mediated the effects of WFC on job satisfaction, psychological distress, and depersonalization, whereas it partially mediated effects on emotional exhaustion. Moreover, females were found to report higher levels of WFC and also higher levels of job satisfaction (Hypothesis 3). However, WFC effects on job satisfaction, burnout and psychological distress did not differ in men and women.

STUDY 2

The purpose of the second study was to replicate the findings from the first study in the private occupational sector which is characterized by particularly high levels of work pressures. In addition to assessing general WFC and its relationship with affect at work, job satisfaction, psychological distress, and gender, the study aimed to test the directionality of WFC from work and from home and to test whether affect at work mediates conflict that emanates from home or work roles.

Method

Sample. The second study included a sample of 166 employees (87 males and 72 females) from three large private companies in Athens, Greece employing between 350 and 1500 workers each. The participants were between 29 to 66 years of age ($M = 44.53$ years, $SD = 8.52$). For the selection of the sample, the same criteria used in Study 1 were applied in this study also. All participants were married and 80% had at least one child. The average work experience was 19 years ($SD = 9.5$) and the average income was 19200 euros per annum. Participation in the study was voluntary and took place in the work environment. Full confidentiality was assured by the use of anonymous questionnaires that participants were asked to put in sealed envelopes after completion. Of the total number of participants approached two declined to take part in the study.

Measures. The study included the same scales as in Study 1: the Job Affect Scale (Brief et al., 1988; for positive affect Cronbach's $\alpha = .77$, and for negative affect Cronbach's $\alpha = .77$), the General Index of Job

Satisfaction (Brayfield & Rothe, 1951; Cronbach's $\alpha = .85$), 8 items from the Inventory of Work-Family Conflict (Greenhaus et al., 2000; Cronbach's $\alpha = .81$) and the General Health Questionnaire (Goldberg, 1978; Cronbach's $\alpha = .78$).

In addition to those, the directional Work-Family Conflict scale (WFC-FWC; Carlson & Frone, 2003) was used assessing the direction of conflict. The scale was translated into Greek by the author, blindly back-translated by a Greek graduate student with some items modified to enhance the naturalism of the translations. The WFC-FWC consists of 12 items that measure directional aspects of work to family and family to work conflict and distinguishes psychological and behavioral aspects of role conflict. Therefore, the scale is composed of four subscales with each including three items: (a) work to family conflict external (WFE; example item: 'How often does your job or career keep you from spending the amount of time that you would like to spend with your family?'); (b) work to family conflict internal (WFI; example item: When you are at home, how often do you think about things you need to accomplish at work?); (c) family to work conflict external (FWE; example item: How often does your home-life interfere with your job or career); and, (d) family to work conflict internal (FWI; example item: When you are at work, how often do you think about family related problems?). Each item asked the respondent to indicate how often he or she experienced a specific situation on a 5-point frequency-based response scale that ranged from "1 = almost never/never" to "5 = almost always/always". The internal consistency of the four subscales was satisfactory: Cronbach's alphas were for WFE $\alpha = .84$, for WFI $\alpha = .84$, for FWE $\alpha = .82$, and for FWI $\alpha = .91$.

Factor analyses of the directional WFC-FWC scale. The factor structure of the WFC-FWC scale was examined by conducting both exploratory and confirmatory factor analyses. Exploratory analysis of the scale using the principal components method with orthogonal rotation revealed a clear four factor structure accounting for a total of 80.25% of the variance in line with the scale's structure. Each of the four scale dimensions accounted for almost equal amounts of variance and factor loadings corresponded to the items purported to compose each of the four scale dimensions.

We used confirmatory factor analyses (AMOS 6.0; Arbuckle, 2005) to evaluate the factor structure suggested by the principal component analysis. A correlated four-factor model (Model 3) was compared with the overall fit of two other plausible alternative models: a one-factor model

Table 3. Zero order correlations between the STUDY 2 main variables

	Mean (SD)	1	2	3	4	5	6	7	8	9	10	11
1. Gender		1.00										
2. Age	44.63 (8.38)	-.24**	1.00									
3. WFC	2.97 (.74)	.36**	-.09	1.00								
4. WFE	2.89 (1.86)	.08	-.01	.49**	1.00							
5. WFI	3.01 (1.81)	-.05	.03	.21**	.41**	1.00						
6. FWE	1.31 (1.36)	.20**	-.07	.37**	.44**	.27**	1.00					
7. FWI	3.20 (1.80)	.23**	-.15*	.31**	.26**	.27**	.40**	1.00				
8. Positive affect	3.26 (.64)	-.13	.05	-.34**	-.22**	-.09	-.16*	-.03	1.00			
9. Negative affect	1.83 (.62)	.10	-.02	.36**	.37**	.22**	.23**	.18*	-.40**	1.00		
10. Job satisfaction	3.64 (.62)	-.10	.13	-.29**	-.26**	.01	-.20**	-.05	.54**	-.45**	1.00	
11. Psychological distress	1.87 (.39)	.13	.01	.39**	.29**	.08	.21**	.11	-.48**	.41**	-.30**	1.00

Note: WFC = work-family conflict; WFE = work to family conflict external; WFI = work to family conflict internal; FWE = family to work conflict external; FWI = family to work conflict internal. * $p < .05$; ** $p < .01$; *** $p < .001$.

(Model 1) and a correlated two-factor model (Model 2). As indicated by the chi-square difference test, the four-factor model fit the data significantly better, $\chi^2(52) = 134.6, p = .001$, than the one-factor model, $\chi^2(52) = 762.3, p = .001$, or the two factor model, $\chi^2(52) = 496.8, p = .001$. Moreover, whereas the overall fit of Model 1 and Model 2 was not even close to acceptable, CFI = .43, NFI = .42, RMSEA = .33 and CFI = .64, NFI = .62, RMSEA = .21, respectively, the overall fit of Model 3 was at acceptable levels, CFI = .93, NFI = .89, RMSEA = .09.

Results

Associations between WFC (predictor), affect at work (proposed mediator) and outcome variables. Table 3 presents the zero order correlations among the study's main variables (WFC, job satisfaction, affect at work and psychological distress and burnout). General WFC was associated with all four aspects of the directional WFC-FWC scale. In addition, general WFC was negatively correlated with positive affect at work, $r = -.34, p < .01$, and job satisfaction, $r = -.29, p < .01$, while it positively correlated with negative affect, $r = .36, p < .01$, and psychological distress, $r = .39, p < .01$. Two subscales of the directional WFC-FWC scale were significantly negatively correlated with positive affect at work (for WFE $r = -.22, p < .01$, and for FWE $r = -.16, p < .05$), and job satisfaction (for WFE $r = -.26, p < .01$, and for FWE $r = -.20, p < .05$) suggesting that aspects of the parental and worker roles to do with time pressure may be associated with lower levels

Table 4. Testing the mediatory effects of positive and negative affect between general WFC, job satisfaction and psychological distress

	Job satisfaction		Psychological distress	
	Step 1 (β^1)	Step 2 (β^1)	Step 1 (β^1)	Step 2 (β^1)
Sex	.03	.04	.01	-.01
Age	.13	.13	.03	.02
WFC	-.29***	-.07	.38***	.21*
Positive affect		.40***		-.32***
Negative affect		-.27***		.20*
R ²	.10	.39	.15	.31
R ² change		.28		.17
F Change		33.01***		18.08***

Note: WFC = work-family conflict; * $p < .05$; ** $p < .01$; *** $p < .001$.

of positive affect at work. With regards to negative affect at work there was an almost uniform positive relationship with both psychological and behavioral aspects of WF and FW conflict as assessed by the scale. With regards to gender differences, females reported significantly higher levels of general WFC, $r = .36$, $p < .01$, and both external and internal Family to Work Conflict in the directional WFC-FWC scale (for FWE $r = .20$, $p < .01$, and for FWI $r = .23$, $p < .01$). On the contrary, there were no significant relationships between gender and job satisfaction, affect at work or psychological distress.

The mediation effect of positive and negative affect at work. Table 4 presents the results from the hierarchical regression analyses in two steps that tested the mediating effects of affect at work in the association between general WFC and job satisfaction and psychological distress. Full mediation was observed as regards the relationship between general WFC and job satisfaction, since the impact of the predictor (WFC) on the response variable (job satisfaction) was diminished and rendered nonsignificant after positive and negative affect were entered. The mediation of positive and negative affect were formally tested with two Sobel's tests, $z = -3.87$, $p < .001$, and $z = -3.64$, $p < .001$, respectively. Partial mediation was observed as regards the relationship between general WFC and psychological distress, since the impact of WFC as a predictor on psychological distress was diminished, but remained significant after the proposed mediator was entered. The mediation of positive and negative affect was formally tested with two Sobel's tests, $z = 3.48$, $p < .001$, and $z = 3.19$, $p < .001$, respectively. In a separate analysis

Table 5. Testing the mediatory effects of positive and negative affect between general WFC, job satisfaction and psychological distress

	Job satisfaction		Psychological distress	
	Step 1 (β^1)	Step 2 (β^2)	Step 1 (β^1)	Step 2 (β^2)
Sex	-.06	.02	.10	.04
Age	.10	.08	.01	.02
WFE	-.29**	-.15*	.24**	.13
WFI	.15	.17*	-.05	-.07
FWE	-.15	-.10	.09	.04
FWI	.09	.06	.01	.03
Positive affect		.40***		-.34***
Negative affect		-.25**		.21**
R ²	.13	.40	.09	.29
R ² change		.27		.20
F Change		33.63***		21.14***

Note: WFE = work to family conflict external; WFI = work to family conflict internal; FWE = family to work conflict external; FWI = family to work conflict internal. * $p < .05$ ** $p < .01$ *** $p < .001$.

we also entered the interaction term of gender and work-family conflict after centering (Aiken & West, 1991) and entered it in the first step. In no case was the interaction term significant.

Table 5 presents the results from hierarchical regression analyses in two steps that tested the mediating effects of affect at work in the association between the four subscales of the directional WFC-FWC scale and job satisfaction and psychological distress. Partial mediation was observed as regards the WFE and job satisfaction since the impact of the predictor (WFE) on the response variable (job satisfaction) was diminished after the proposed mediator was entered, but the effect remained. The mediation of positive and negative affect was formally tested with two Sobel's tests, $z = -2.76$, $p < .001$, and $z = -3.60$, $p < .001$, respectively. Interestingly, the impact of WFI on job satisfaction was unaffected when affect at work was entered. Full mediation was observed as regards the relationship between WFE and psychological distress, since the impact of WFE as a predictor on psychological distress was rendered nonsignificant after the proposed mediator was entered. Mediation of positive and negative affect was also formally tested with two Sobel's tests, $z = -2.67$, $p < .001$, and $z = -3.47$, $p < .001$, respectively. In separate analyses, entering positive and negative affect in different steps demonstrated that positive affect had more impact in predicting psychological distress but the two facets of affect at work were equal predictors of job satisfaction. In separate analyses we entered the interaction term of gender and each of the four aspects of work-family

conflict after centering (Aiken & West, 1991). In no case was the interaction significant.

Regressing directional WFC-FWC scale on general WFC. To ascertain which direction of WFC is more influential on general WFC the four subscales of the directional WFC-FWC scale were regressed on the general WFC scale controlling for gender and age. The results revealed that WFE was the only significant independent predictor of general WFC, $\beta = .39, t = 5.11, p < .001$. The model's cumulative predictive power was $R^2 = .36, F(6, 160) = 14.23, p < .001$.

GENERAL DISCUSSION

The two studies presented here extended existing work on the consequences of WFC on job satisfaction and psychological distress in and outside the work setting focusing on the links with positive and negative affect at work and gender.

The results from both studies confirmed expectations for an inverse relationship between WFC and job satisfaction and a positive relationship between WFC and psychological distress within and outside the work setting (Hypothesis 1). These findings are in keeping with an ever increasing research literature that documents the adverse effects family- and work-role conflict has for job satisfaction and work distress (Kossek & Ozeki, 1998; Netemayer et al., 1996) and general psychological distress (Frone et al., 1997; Kelloway et al., 1999; Parasuraman et al., 1996). Additionally, WFC was inversely related with positive affect at work in both studies and positively associated with negative affect in Study 2. Both directions of WFC (work to family and family to work conflict) were associated with positive and negative affect at work and both external and internal aspects.

However, positive affect was significantly associated only with WFE and FWE suggesting that behavioral aspects of either work-family conflict or family-work conflict (time pressures, role pressures) may impact on how one feels at work. To our knowledge, this is one of the first studies that point to links between WFC and work affect. The results on the direct association between WFC suggest that positive affect may be a more sensitive indicator of WFC effects on workers' emotionality since positive affect was consistently correlated with WFC in both studies. At the same

time, in both studies, positive *and* negative affect were consistent independent predictors of the work outcomes (job satisfaction, burnout) and general psychological distress. This is a noteworthy finding that substantiates previously made suggestions for the importance to include indicators of positive affectivity among the possible consequences of WFC effects at work (Parasuraman & Greenhaus, 2002; Montgomery et al., 2003) and provide further consistent evidence that processes associated with positive and negative affect should be examined independently (Egloff, 1998; Fredrickson, 1998).

The results from the mediation analyses further point to the important role of positive and negative affect when examining WFC influences on both work outcomes (job satisfaction, burnout) and general psychological distress as stated in the Hypotheses 2a and 2b. In the first study positive affect was a significant mediator of general WFC on job satisfaction. In the second study, both positive and negative affect significantly and *independently* reduced the impact of WFC on job satisfaction and psychological distress.

It is noteworthy that relationships between WFC and affect at work, job satisfaction, and psychological well-being (both contextual and general) were stronger in the private occupational sector (Study 2) than the public sector (Study 1). This finding was certainly expected and highlights how the occupational context is associated with levels of WFC. Related to this observation is Grandley and Cropanzano's (1999) *conservation of resources theory* suggested to apply in work-family conflict phenomena. The framework proposes that workers seek to maintain resources which include work or personal conditions (e.g., security at work), personal characteristics (e.g., self-esteem) or energies (e.g., time, money). In the case of public teachers, the particular occupational context in Greece may promote the conservation of resources and in particular in what has to do with energy (flexible time schedule) and personal conditions (self-esteem).

Hypothesis 3 concerned gender differences in the absolute levels of WFC and the possible differences of WFC outcomes in men and women. In keeping with our hypothesis, women in both private and public sectors reported higher levels of general WFC than men although the effect was larger in the private sector. Examination of the direction of interference (work to family or family to work conflict) showed that women reported experiencing higher family to work conflict as described in previous studies (Frone et al., 1992b; Parasuraman, Greenhaus, & Granrose, 1992) in

support of the gender role theory (Pleck, 1977). However, the results did not reveal any gender differences in reported levels of work to family conflict and did not find evidence of differential effects of WFC in predicting the job outcomes and the general psychological distress. Certainly, family to work conflict did not differentially predict work outcomes for women as one would expect. These findings add to a number of existing studies that have not found gender differences in the impact of WFC on psychological outcomes (e.g., Blanchard-Fields et al., 1997; Eagle et al., 1997) constituting that the work-family role pressures affect both men and women.

Finally, in order to ascertain the relationships between dimensional and general aspects of WFC we regressed the four subscales of WFC-FWC (external and internal) on the general WFC. The results suggested that work to family conflict is a prevalent source of role interference experienced by both working men and women. The findings from these two studies are in keeping with results suggesting that employees perceive work interfering with their family life (work-to-family conflict) more than the other way around (i.e., family-to-work conflict) (Frone et al., 1992a; Geurts, Komper, Roxburgh, & Houtman, 2003; Kinnunen & Mauno, 1998).

Implications and applications

The main contribution of the present study was pointing to the significance of affect at work as a full mediator of WFC for work outcomes (job satisfaction, burnout) and partial mediator of WFC and psychological distress. The main implication of this finding is that targeting affective reactions at work could make a difference to both work outcomes and psychological distress making affect at work an important indicator of such outcomes. The findings of these studies would also be of interest to policy makers in Greece. Currently, there is limited evidence about issues having to do with WFC in Greece. The present analysis provided some initial findings towards understanding the extent to which working men and women experience conflict between the work and family roles in different occupational sectors and how these may differentially affect their working lives and psychological distress. Further research should examine how affect at both home and work environments interacts to contribute to WFC levels in men and women.

Limitations

Despite their contributions the present studies have some limitations. More significant is the correlational nature of the design. Although the hypotheses were guided by theoretical concerns and a coherent body of previous research, the correlational design of the two studies does not allow causal inferences to be made about the direction of the WFC and affect at work, job satisfaction and psychological distress relationships. Certainly, it is possible that positive and negative affect at work, satisfaction and burnout contribute to levels of WFC and also that psychological distress may be a partial cause of negative affectivity at work. Secondly, the two studies used retrospective measures of affect at work. Future research should employ concurrent measures on emotion and mood using event sampling methodologies. Also, future research should expand the study of affective phenomena associated with WFC precursors and outcomes by looking at the role of discrete positive and negative emotions (e.g., happiness, anger, etc.). Indicative of the significance of discrete emotions are findings that, compared to general job affect (positive and negative mood) and job cognitions, discrete emotions were more predictive of organization citizenship behaviors (Lee & Allen, 2002).

Conclusions

The results from the two studies confirm expectations for the negative effects of WFC on work outcomes and psychological distress pointing to the role of affect as important predictor of job satisfaction, burnout and psychological distress. These results consolidate the view of positive and negative affect as independent, potent indicators of a wider range of the work experience (Barsade et al., 2003). The studies also returned mixed results as to whether reported gender differences in levels of WFC do have a differential effect on psychological factors at work and generally.

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