

Work–Family Conflict and Employee Psychiatric Disorders: The National Comorbidity Survey

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This study examined the relation between work–family conflict and several types of psychiatric disorders: mood, anxiety, substance dependence, and substance abuse. Survey data were obtained from a representative national sample of 2,700 employed adults who were either married or the parent of a child 18 years old or younger. Hierarchical logistic regression analyses revealed that both work-to-family and family-to-work conflict were positively related to having a mood, anxiety, and substance dependence disorder. Depending on the type of work–family conflict and type of disorder, employees who reported experiencing work–family conflict often were 1.99–29.66 times more likely than were employees who reported no work–family conflict to experience a clinically significant mental health problem. No support was found for gender differences.

Research on the predictors of employee health has grown considerably over the past 2 decades. Most research has focused on predictors that are intrinsic to the work environment (e.g., workload, decision latitude, work boredom, exposure to physical hazards). Nonetheless, a smaller body of research has begun to examine the relation of work–family conflict to employee health outcomes. Work–family conflict represents a source of stress at the interface of work and family life, in that it reflects a lack of overall fit between work and family life (Frone, Russell, & Barnes, 1996; Frone, Russell, & Cooper, 1992a; Frone, Yardley, & Markel, 1997). Although research on the health outcomes of work–family conflict has become more prevalent, this literature is in need of further replication and development. Therefore, the present study has two goals. The first goal is to review briefly prior research on work–family conflict and employee health outcomes. The second goal is to identify two issues that need further attention and to present data from a national sample of U.S. workers.

Past Research on Work–Family Conflict and Employee Health

Work–family conflict occurs when one's efforts to fulfill work role demands interfere with one's ability to fulfill family demands

and vice versa (Greenhaus & Beutell, 1985). This definition of work–family conflict implies a bidirectional relation between work and family life. In other words, work can interfere with family life (work-to-family conflict) and family life can interfere with work (family-to-work conflict; e.g., Frone et al., 1992a; Frone, Yardley, & Markel, 1997; Frone & Carlson, 1999). Despite this conceptual distinction, early research simply examined the relation of work-to-family conflict (e.g., Bedeian, Burke, & Moffett, 1988; R. J. Burke, 1989) or overall work–family conflict (e.g., Bromet, Dew, & Parkinson, 1990; Rice, Frone, & McFarlin, 1992) to various health-related outcomes. In contrast, more recent research has begun to focus on the main-effect relations of both types of work–family conflict to psychological health and on the moderating influence of gender.

On the basis of identity theory (e.g., P. J. Burke, 1991; Schlenker, 1987), Frone et al. (1996) argued that researchers need to examine simultaneously both work-to-family and family-to-work conflict to understand fully the impact of the work–family interface on employee health. Identity theory posits that (a) people devote considerable time and energy to constructing and maintaining desired identities and that (b) people are threatened when their self-images are damaged by impediments to self-identifying activities (P. J. Burke, 1991; Schlenker, 1987). From the context of identity theory, work-to-family conflict represents an impediment to successfully meeting family-related demands and responsibilities, thereby undermining a person's ability to construct and maintain a positive family-related self-image (e.g., "I'm a devoted and successful mother or father"). Conversely, family-to-work conflict represents an impediment to successfully meeting work-related demands and responsibilities, thereby undermining a person's ability to construct and maintain a positive work-related self-image (e.g., "I'm a devoted and successful employee, manager, or business owner"). Because both work and family roles represent core components of adult identity, impediments to both work- and family-related identity formation and maintenance are likely to be experienced as stressful. Thus, Frone et al. (1996) proposed the following hypothesis:

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Hypothesis 1: Both work-to-family conflict and family-to-work conflict are independently and positively related to poor employee health.

Although two studies have failed to support this hypothesis (Klitzman, House, Israel, & Mero, 1990; Wiley, 1987), several other studies do support it. Hughes and Galinsky (1994), using a sample of 429 employees from a single company, found that both types of conflict were positively related to a global measure of psychological symptoms. MacEwen and Barling (1994), using daily diary data from 40 police department employees and their spouses, found that both types of conflict were positively related to **depression and anxiety**. O'Driscoll, Ilgen, and Hildreth (1992), using a community sample of 120 adults, found that both types of conflict were positively related to a global measure of psychological distress. Frone et al. (1996) examined the relation of work-family conflict to several health outcomes in two representative household samples (Sample 1, $N = 496$; Sample 2, $N = 605$). In both samples, **work-to-family conflict and family-to-work conflict were related to higher levels of depressive symptoms, heavy alcohol use, and poor physical health.**

In addition to the main-effect relation between work-family conflict and employee health, prior conceptual discussions of work-family stress processes suggest that gender represents a potentially important moderator variable (e.g., Eckenrode & Gore, 1990; Kline & Cowan, 1989). Although no specific hypothesis is usually provided regarding the direction of the potential moderating influence of gender, the implicit expectation is that work-family conflict might be more detrimental for employed women, because they have primary responsibility for family roles. To extend this line of research, Frone et al. (1996) used identity theory and research on gender-role socialization to develop a set of directional hypotheses concerning the moderating influence of gender. As noted earlier, identity theory suggests that the frequent experience of work-to-family conflict and family-to-work conflict may be stressful because these constructs represent the extent to which individuals experience impediments to the development or maintenance of a positive family- and work-related self-image, respectively. Moreover, the gender-role socialization literature shows **that men are socialized to give priority to the breadwinner role, whereas women are socialized to give priority to homemaker and motherhood roles** (Major, 1993; Thompson & Walker, 1989). Taken together, identity theory and research on gender-role socialization suggest that gender may moderate the relations between work-family conflict and health but that the direction of gender's moderating influence differs across the two types of work-family conflict (see Frone et al., 1996, for a more detailed discussion). Specifically, Frone et al. (1996) proposed the following hypotheses:

Hypothesis 2a: Gender moderates the relation of work-to-family conflict to employee health, such that this relation is stronger among women than among men.

Hypothesis 2b: Gender moderates the relation of family-to-work conflict to employee health, such that this relation is stronger among men than among women.

Only two studies have presented data regarding the differential moderating influence of gender on the relation between work-family conflict and employee health. MacEwen and Barling (1994)

found that when separate regression analyses were conducted for men and women, the pattern of results revealed that **work-to-family conflict was more strongly related to both depression and anxiety among women than among men.** In contrast, family-to-work conflict was more strongly related to depression and anxiety among men than among women. Although this pattern of results is consistent with Frone et al.'s (1996) differential moderating effect hypothesis, MacEwen and Barling (1994) did not actually test for interactions between gender and the two types of work-family conflict. Frone et al. (1996), however, did examine the differential moderating influence of gender by explicitly testing interactions between gender and the two types of work-family conflict as predictors of three health outcomes (**depressive symptoms, poor physical health, and heavy alcohol consumption**) in two community samples. Of the 12 gender interactions tested, only 2 were statistically significant, and only 1 of these was in the predicted direction.

In summary, the balance of evidence previously reviewed suggests two conclusions. First, there is growing evidence that both types of work-family conflict are positively and independently related to poor employee health. Second, there is little evidence that gender moderates the relation of the two types of work-family conflict to employee health. In other words, it appears that both types of work-family conflict may be detrimental to the health of men and women. However, this conclusion should be tempered by the fact that only one study explicitly tested the differential moderating influence of gender.

The Present Study

This study seeks to replicate and extend past research on work-family conflict and employee mental health. Specifically, the present study tests Hypotheses 1, 2a, and 2b from Frone et al. (1996) using data from the National Comorbidity Survey (NCS; Kessler, 1994a, 1994b, 1995). The NCS represents the first truly representative epidemiologic investigation of the prevalence, causes, and consequences of psychiatric morbidity and comorbidity in the United States. This data set provides an opportunity to extend prior research on work-family conflict and mental health in two ways.

First, all prior studies of work-family conflict and psychological health have used outcome measures that assess general psychological distress or depressive symptoms. These measures largely assess between-persons differences within a subclinical or normal range of negative emotion (Coyne, 1994; Kessler & Zhao, 1999). Such measures make it difficult to judge the practical importance of past findings for employers and social policy makers (Kessler & Zhao, 1999). Currently, no data exist showing that work-family conflict is related to more severe psychiatric disorders that may impair individuals' ability to function adequately at work or at home. Past research using the NCS has documented that psychiatric disorders are associated with negative employment outcomes such as poor labor market outcomes, excessive work-related attendance problems, and lowered productivity at work (Ettner, Frank, & Kessler, 1997; Greenberg, Kessler, Nells, Finkelstein, & Berndt, 1996; Kessler & Frank, 1997). Although attempts to estimate the cost of psychiatric disorders need to be interpreted cautiously, Greenberg et al. (1996) estimated that the aggregate workplace cost of mood disorders (major depression, bipolar dis-

order, and dysthymia) is approximately \$33 billion per year. The NCS administered a detailed diagnostic interview that provided diagnoses of four classes of psychiatric disorders relevant to the present study (mood disorders, anxiety disorders, substance dependence disorders, and substance abuse disorders). Because work-family conflict represents a prevalent source of work-related stress for both men and women (e.g., Eagle, Miles, & Icenogle, 1997; Frone, Russell, and Cooper, 1992b), it is both conceptually and practically important to learn whether work-family conflict is related to clinically significant levels of psychiatric dysfunction.

Second, the generalizability of past findings relating work-family conflict to employee health is unknown. Although growing evidence supports the hypothesis that both types of work-family conflict undermine employee health, past studies have reported some inconsistent findings. These inconsistencies may result from the common reliance on narrowly defined convenience samples. Although Frone et al. (1996) reported data from two representative samples of employed adults, these samples were only representative of one county in New York State. In contrast, the NCS provides data from a nationally representative sample of 2,700 employed adults who are married or parents. This allows examination of the generalizability of past findings to workers in the U.S. population.

Method

Sample and Procedures

The NCS is a national study of a representative sample of 8,098 individuals between the ages of 15 and 54 years. The NCS was designed to produce data on the prevalence, causes, and consequences of psychiatric morbidity and comorbidity in the United States. The sample was based on a stratified, multistage area probability sampling frame of the noninstitutionalized civilian population in the 48 coterminous states, with a supplemental sample of students living in campus group housing. Data were collected face to face during household interviews by the professional interviewing staff of the Survey Research Center at the University of Michigan. The field period ran from September 1990 to February 1992. Data collection occurred in two parts. In Part 1, the diagnostic interview was administered to all 8,098 participants. In Part 2, a risk factor interview was administered to a probability subsample of 5,877 participants. This subsample consisted of (a) all Part 1 participants aged 15 to 24 years, (b) all older Part 1 participants who screened positive for a disorder on the basis of initial questions in at least one section of the Part 1 diagnostic interview, and (c) a one-in-six random sample of the remaining Part 1 participants (see Kessler, 1994a, 1994b, 1995, for more detail about procedures for the NCS). The overall response rate for the study was 82%.

The participants used in the present study were 2,700 adults between the ages of 18 and 54 years who (a) participated in both Parts 1 and 2 of the NCS, (b) were employed at least 20 hr per week, and (c) were either married, which includes individuals cohabiting as married, or a parent of a child age 18 years or younger. On average, the participants were 37 years old, had completed 13 years of formal education, and were employed 43 hr per week. Fifty-eight percent held white-collar jobs, and 42% held blue-collar jobs. Twelve percent of the respondents were self-employed. Fifty-four percent were men, and 79% were White. In terms of marital and parental status, 86% were married, and 84% had at least one child age 18 or younger. The modal number of children 18 or younger was 2.0 (range = 0–8). The modal family income category was \$35,000–49,999.

Measures

Work-family conflict. Four items developed for the NCS were used to assess work-family conflict. Two items assessed work-to-family interfer-

ence: "How often do things going on at work make you tense and irritable at home?" and "How often do the demands of your job interfere with your family life?" Two items assessed family-to-work interference: "How often do things going on at home make you tense and irritable on the job?" and "How often do the demands of your family interfere with your work on the job?" The content of these items are very close to items used in other studies of work-family conflict (e.g., Frone et al., 1992a; Frone & Carlson, 1999; Netemeyer, Boles, & McMurrian, 1996). Each item used a 4-point, frequency-based response scale ranging from *often* (1) to *never* (4). All items were reverse-scored, so that high scores represent more work-family conflict. Coefficient alpha was .67 for work-to-family conflict and .64 for family-to-work conflict.

Psychiatric disorders. The psychiatric diagnoses obtained in the NCS followed the criteria of the *Diagnostic and Statistical Manual of Mental Disorders*, third edition, revised (American Psychiatric Association, 1987) and were based on a modified version of the Composite International Diagnostic Interview (CIDI; World Health Organization, or WHO, 1990a; for an overview of the CIDI, see Essau & Wittchen, 1993). The CIDI is a structured diagnostic interview developed in a collaborative project between the WHO and the Alcohol, Drug Abuse, and Mental Health Administration (Robins, Wing, Wittchen, & Helzer, 1988). The CIDI was developed in modular form to allow researchers to use only a subset of diagnostic sections, and diagnoses are generated with the CIDI diagnostic program (WHO, 1990b).

The CIDI was extensively pretested for its use in the NCS. On the basis of these pretest results, the NCS authors implemented a number of strategies to encourage accurate and truthful responding, such as motivational instructions, commitment questions, and contingent feedback. Also, changes were made to the CIDI to improve question comprehension, improve task comprehension, and reduce recall errors (see Kessler et al., 1997; Kessler, Wittchen, Abelson, & Zhao, 2000). Methodological studies conducted as part of the NCS and the WHO field trials have supported the reliability and validity of the CIDI (for reviews, see Kessler et al., 1997; Wittchen, 1994). For example, a comparison of the prevalence rates for the mood, anxiety, and substance disorders between diagnoses based on lay interviewers' administration of the CIDI in the NCS and those obtained from structured reinterviews with trained clinicians showed no differences (Kessler et al., 1997). Moreover, the proportion of CIDI-diagnosed cases in the NCS that were confirmed in clinical reinterviews (positive predictive value) was high. With the exception of general anxiety disorder, the positive predictive values ranged from .60 to .74 for mood disorders, from .63 to .93 for anxiety disorders, and from .87 to 1.0 for substance use disorders (Kessler et al., 1997). For the CIDI diagnostic categories used in the present study, WHO field trial results showed high levels of interrater agreement (kappa coefficients greater than .93) and at least moderate levels of test-retest agreement (kappa coefficients ranging from .52 to .97; Wittchen, 1994).

The NCS used the sections of the CIDI that yield four groups of diagnoses: mood disorders (major depressive episode, manic episode, dysthymia), anxiety disorders (panic disorder, agoraphobia, social phobia, simple phobia, posttraumatic stress disorder, generalized anxiety disorder), psychoactive substance use disorders (alcohol abuse, alcohol dependence, drug abuse, drug dependence), and other disorders (schizophrenia and other nonaffective psychosis, conduct disorder, and antisocial personality disorder). The focus of the present study is on a current diagnosis of a psychiatric disorder (i.e., occurring during the 12 months preceding the interview). Consistent with other studies using the NCS data (e.g., Kessler, Foster, Saunders, & Stang, 1995; Kessler & Frank, 1997) and to reduce the number of analyses, I formed four general outcome variables that represent the presence or absence of a mood disorder, anxiety disorder, substance dependence disorder, and substance abuse disorder. For example, for the mood disorder outcome, a participant received a score of 0 if he or she had a negative diagnosis on all three types of mood disorders (major depressive episode, manic episode, dysthymia) and a score of 1 if he or she had a

positive diagnosis on any of the three mood disorders. I followed a similar strategy to create the other three outcome variables. No outcome variables were created from the last category of other diagnoses previously listed, because only lifetime diagnoses of conduct disorder and antisocial personality disorder were assessed. Although a 12-month diagnosis of schizophrenia and other nonaffective psychosis was obtained, too few respondents received this diagnosis. For example, in the present subsample of 2,700 employed adults, only 9 (0.3%) participants received this diagnosis.

Covariates. In addition to gender (0 = female, 1 = male), which served as a substantive moderator variable in the analyses, I controlled for nine additional sociodemographic variables. These variables were used as controls to avoid possible spurious relations between the work-family conflict variables and the psychiatric disorder outcomes. They were also the most common covariates used in past research on work-family dynamics. The additional nine covariates were as follows: race (0 = White, 1 = minority), age (in years), education (in years), family income (22 categories ranging from less than \$1,000 to \$150,000 and over), number of work hours per week, job type (0 = blue collar, 1 = white collar), self-employment (0 = not self-employed, 1 = self-employed), number of children age 18 or younger, and marital status (0 = not married, 1 = married).

Data Analyses

Regression model. Because the four outcome variables were dichotomous, I used hierarchical logistic regression analysis to examine the relations of the predictor variables to the psychiatric outcomes (Long, 1997). For each predictor variable, the unstandardized regression coefficient and odds ratio are reported. The odds ratio for a predictor variable is computed by exponentiating its regression coefficient—that is, $\exp(b)$. In the present context, the odds ratio represents the change in the odds of having a psychiatric diagnosis for a one-unit change in a predictor variable. If the odds ratio is greater than 1.0, it reflects an increase in the odds of a diagnosis for a one-unit change in the predictor (i.e., positive predictor–outcome relation). If the odds ratio is less than 1.0, it reflects a decrease in the odds of a diagnosis for a one-unit change in the predictor (i.e., negative predictor–outcome relation). If the odds ratio is 1.0, it reflects no change in the odds of a diagnosis for a one-unit change in the predictor (i.e., null predictor–outcome relation). Compared with the unstandardized logistic regression coefficient, the odds ratio provides a means to quantify the practical importance of a relation between a predictor and a dichotomous outcome.

Complex sample design. The NCS used a stratified, multistage cluster sample with unequal probabilities of selection. Complex sample designs create several analytic problems that need to be addressed. First, because of the unequal probabilities of selection, sample weights were used to obtain unbiased parameter estimates (e.g., Deaton, 1997; Kessler, Little, & Groves, 1995; Lehtonen & Pahkinen, 1994). Second, because of the stratified multistage cluster design, standard errors of parameter estimates from conventional statistical programs are biased downward, leading to overestimates of statistical significance. To overcome this problem, standard errors were computed using the Taylor-series linearization method (e.g., Deaton, 1997; Kessler, Little, & Groves, 1995; Lehtonen & Pahkinen, 1994). Finally, in hierarchical logistic regression, it is possible to test the joint significance of a block of variables using a Wald chi-square test (Long, 1997). Complex sample designs, however, typically cause the Wald chi-square to produce an overly liberal test of statistical significance. Therefore, an adjusted Wald test was used that is distributed as an F statistic with k and $d - k + 1$ degrees of freedom, where k is the number of predictors in the block and d is the number of primary sampling units (PSUs) minus the number of strata (e.g., Lehtonen & Pahkinen, 1994). In the NCS, d is 42 (84 PSUs – 42 strata).

Results

Table 1 presents the means, standard deviations, and zero-order correlations for all variables. The hierarchical logistic regression results are summarized in Table 2. As expected, the block of sociodemographic variables entered at Step 1 accounted for a statistically significant increment in model fit (see adjusted Wald F tests) for each of the outcome variables. Women were more likely than men to have a mood and anxiety disorder, whereas men were more likely than women to have a substance dependence and substance abuse disorder. Minority respondents were less likely than White respondents to have an anxiety and substance dependence disorder. Age was negatively related to having a mood, anxiety, and substance dependence disorder, and education was negatively related to having an anxiety and substance dependence disorder. Self-employed respondents were more likely than those who were not self-employed to have a mood disorder. Finally, compared with unmarried participants, those who were married were less likely to have a mood, anxiety, and substance dependence disorder.

The second block of variables, which contained the two work-family conflict variables, accounted for an additional and statistically significant increment in model fit for three of the outcome variables. Supporting Hypothesis 1, both work-to-family and family-to-work conflict were significantly and positively related to having mood, anxiety, and substance dependence disorders. As noted earlier, the odds ratios reported in Table 2 for the work-family conflict measures reflects the expected change in the odds of having each disorder assuming a one-unit change in work-family conflict. Therefore, one can gauge the practical significance of these relations by calculating the expected change in the odds of each of the three disorders for participants reporting that they experienced work-family conflict often relative to those who reported never experiencing work-family conflict. This can be accomplished by computing $\exp(b \times 3)$, where b is the regression coefficient and 3 is the range-of-response scale for work-family conflict. Thus, compared with participants reporting they did not experience work-to-family conflict, those who reported experiencing it often were 3.13 times more likely to have a mood disorder, 2.46 times more likely to have an anxiety disorder, and 1.99 times more likely to have a substance dependence disorder. Compared with participants who reported that they did not experience family-to-work conflict, those who reported experiencing it often were 29.66 times more likely to have a mood disorder, 9.49 times more likely to have an anxiety disorder, and 11.36 times more likely to have a substance dependence disorder.

Finally, the third block of variables, containing the two Gender \times Work-Family Conflict interactions, accounted for an additional and statistically significant increment in model fit for the anxiety disorder outcome only. Of the two interaction terms, the Gender \times Family-to-Work Conflict interaction was statistically significant. Consistent with Hypothesis 2b, simple effects analysis (Aiken & West, 1991) revealed that the relation of family-to-work conflict to having an anxiety disorder was stronger among men ($b = 1.01$, odds ratio = 2.74) than among women ($b = 0.55$, odds ratio = 1.73). Nonetheless, the results provided no overall support for either Hypothesis 2a or Hypothesis 2b.

The main effect results for work-family conflict (see Table 2) revealed that family-to-work conflict was more strongly related to

Table 1
Descriptive Statistics and Intercorrelations

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Work-to-family conflict	2.32	0.76	—															
2. Family-to-work conflict	1.96	0.61	.46	—														
3. Affective disorder	0.09	0.28	.13	.24	—													
4. Anxiety disorder	0.16	0.37	.12	.21	.33	—												
5. Substance dependence disorder	0.07	0.26	.08	.14	.16	.13	—											
6. Substance abuse disorder	0.02	0.15	.01	.02	.00	.06	.02	—										
7. Gender ^a	0.54	0.50	.01	-.10	-.09	-.15	.13	.05	—									
8. Race ^b	0.21	0.41	-.15	-.10	.02	-.01	-.04	-.02	-.05	—								
9. Age	36.79	8.38	-.09	-.12	-.05	-.08	-.10	-.03	.05	-.10	—							
10. Education	13.17	2.40	.19	.11	-.03	-.10	-.09	.00	-.03	-.11	.04	—						
11. Income	17.12	3.12	.10	.00	-.05	-.07	-.07	-.02	.09	-.19	.26	.34	—					
12. No. work hours	43.25	10.76	.20	.03	-.01	-.05	.04	.02	.36	-.04	-.01	.05	.09	—				
13. Job type ^c	0.58	0.49	.11	.10	.00	-.04	-.10	-.02	-.24	-.10	.12	.45	.23	-.04	—			
14. Self-employment ^d	0.12	0.32	.05	.12	.03	-.01	.02	.01	.10	-.10	.12	-.05	.02	.08	-.02	—		
15. Marital status ^e	0.86	0.34	.10	-.06	-.13	-.07	-.05	.01	.07	-.18	.07	.05	.32	.00	.03	.06	—	
16. No. children 18 or younger	1.44	1.26	.07	.11	.02	-.04	.04	.00	.07	.09	-.14	-.06	-.08	.06	-.12	-.01	-.11	—

Note. $|r| \geq .05, p < .05$.

^a 0 = female, 1 = male. ^b 0 = White, 1 = minority.

^c 0 = blue collar, 1 = white collar.

^d 0 = not self-employed, 1 = self-employed.

^e 0 = not married, 1 = married.

the mood, anxiety, and substance dependence disorders than was work-to-family conflict. Therefore, I conducted a set of post hoc tests to see whether these differences were statistically significant. An adjusted Wald test for the difference in dependent regression coefficients revealed that family-to-work conflict was significantly more strongly related than work-to-family conflict to having a mood, $F(1, 42) = 12.20, p = .001$, anxiety, $F(1, 42) = 6.22, p = .017$, and substance dependence, $F(1, 42) = 8.40, p = .006$, disorder.

Discussion

This study makes three contributions to research on the relation between work-family conflict and mental health. The first contribution is an examination of the relation between work-family conflict and employee psychiatric disorders. Past research reviewed earlier in this article has shown that both work-to-family conflict and family-to-work conflict are related to general measures of psychological distress (e.g., Frone et al., 1996; Hughes & Galinsky, 1994; MacEwen & Barling, 1994; O'Driscoll et al., 1992). Nonetheless, it is not clear from such findings whether work-family conflict represents a source of stress that may be associated with more severe detriments to psychological health. This study presents the first set of data showing that both types of work-family conflict are positively related to clinically significant diagnoses of mood, anxiety, and substance dependence disorders. Additional evidence of the practical significance of these findings was revealed by the size of the odds ratios comparing individuals who experience work-family conflict often with those who report never experiencing work-family conflict. Individuals who experience work-to-family conflict often were 3.13 times more likely to have a mood disorder, 2.46 times more likely to have an anxiety disorder, and 1.99 times more likely to have a substance dependence disorder than were individuals with no work-to-family conflict. Individuals who experience family-to-work conflict often were 29.66 times more likely to have a mood disorder, 9.49 times more likely to have an anxiety disorder, and 11.36 times more likely to have a substance dependence disorder than were individuals with no family-to-work conflict.

The present results also reveal that family-to-work conflict was more strongly related to the psychiatric disorders than was work-to-family conflict. This finding may be explained by differences in attributions of responsibility for the cause of work-family conflict. Individuals may attribute responsibility for work-to-family conflict externally to the demands and problems imposed by their work organizations. In other words, individuals may hold their employers or employing organizations responsible for the occurrence of work-to-family conflict. In contrast, individuals may attribute responsibility internally for family-to-work conflict. Family demands that spill over into the workplace may be viewed by individuals as resulting from their own inability to effectively manage their family lives. Such differences in attributions of responsibility or blame may explain the difference in the relative strength of the association between the two types of work-family conflict and mental health.

The second contribution of this study is that it provides a test of the differential moderating effect of gender on the relation between work-family conflict and employee health. Frone et al. (1996) hypothesized that work-to-family conflict should have a stronger

Table 2
Logistic Regression Results

Variable	Mood disorder			Anxiety disorder			Substance dependence disorder			Substance abuse disorder		
	Adjusted Wald F	b	Odds ratio	Adjusted Wald F	b	Odds ratio	Adjusted Wald F	b	Odds ratio	Adjusted Wald F	b	Odds ratio
Step 1	6.57***			11.34***			12.13***			2.36*		
G ^a		-0.70***	0.50		-0.95***	0.38		1.20***	3.32		0.75**	2.12
Race ^b		-0.09	0.91		-0.30*	0.74		-0.64**	0.53		-0.29	0.75
Age		-0.02*	0.98		-0.02**	0.98		-0.05***	0.95		-0.02	0.98
Education		-0.05	0.95		-0.13***	0.88		-0.12***	0.88		0.04	1.04
Income		0.02	1.02		0.02	1.02		-0.01	0.99		-0.06	0.94
No. work hours		0.00	1.00		0.00	1.00		-0.01	0.99		0.00	1.00
Job type ^c		-0.04	0.96		-0.18	0.83		-0.13	0.88		-0.10	0.90
Self-employment ^d		0.53**	1.70		0.08	1.08		0.26	1.29		0.16	1.17
No. children 18 or younger		0.00	1.00		0.06	1.07		0.07	1.07		-0.03	0.97
Marital status ^e		-1.00***	0.37		-0.46**	0.63		-0.54*	0.58		0.19	1.21
Step 2	52.77***			31.78***			34.39***			1.89		
WFC		0.38**	1.45		0.30***	1.35		0.23*	1.25		-0.12	0.88
FWC		1.13***	3.08		0.75***	2.11		0.81***	2.24		0.32	1.37
Step 3	0.25			3.37*			0.18			0.23		
G × WFC		0.14	1.15		-0.06	0.93		-0.06	0.94		0.31	1.37
G × FWC		0.00	1.00		0.46*	1.59		0.19	1.21		-0.27	0.76

Note. The degrees of freedom for the adjusted Wald F tests were 10 and 33 for Step 1, and 2 and 41 for Steps 2 and 3. G = gender; WFC = work-to-family conflict; FWC = family-to-work conflict.
^a0 = female, 1 = male. ^b0 = White, 1 = minority. ^c0 = blue collar, 1 = white collar. ^d0 = not self-employed, 1 = self-employed. ^e0 = not married, 1 = married.
* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

impact on the health of women relative to men, whereas family-to-work conflict should have a stronger impact on the health of men relative to women. However, consistent with the findings of Frone et al. (1996), the present study found that gender did not moderate the relation between work-family conflict and psychiatric disorders. Thus, evidence is growing to show that work-family conflict is equally deleterious to the health of both male and female employees.

The final contribution of this study is that it extends the generalizability of past research. The present results show that prior findings regarding the significant main-effect relations of work-family conflict to psychological distress and the nonsignificant moderating influence of gender generalize to a large national sample of employees and to measures of clinically relevant mental health problems.

Before discussing directions for future research and practical implications, three limitations of the present research should be noted. First, both dimensions of work-family conflict were only assessed with two items that may not have adequately captured the full content domain of work-to-family and family-to-work conflict. Despite this limitation, the results support prior research that has used different measures of both types of work-family conflict that vary in length (e.g., Frone et al., 1996; Hughes & Galinsky, 1994; MacEwen & Barling, 1994; O'Driscoll et al., 1992). Second, because the data were cross-sectional, one cannot draw causal inferences regarding the relations between work-family conflict and the psychiatric disorders. Nonetheless, a 4-year longitudinal study by Frone, Russell, and Cooper (1997) provides preliminary evidence that work-family conflict may be causally antecedent to employee health. Although Frone, Russell, and Cooper (1997) did not assess psychiatric disorders, they found that work-family conflict assessed at baseline predicted higher levels of psychological distress, poor physical health, and heavy drinking assessed 4 years later, even after controlling for baseline assessments of the outcomes. Finally, the data were all self-reported. However, because the psychiatric diagnoses were obtained through a complex scoring algorithm, it is less likely that the relations between work-family conflict and the psychiatric disorders are the primary result of single-source method variance. Moreover, evidence exists that work-family conflict is related to both self-report and objective measures of physical health (Frone, Russell, & Cooper, 1997).

Future research can extend the present study in two ways. First, more attention should be devoted to the issue of buffering or vulnerability factors. It is likely that intrapersonal (e.g., personality or coping styles and behaviors), interpersonal (e.g., social support), and environmental (e.g., availability of flexible work hours or child care) characteristics might moderate the observed relations between work-family conflict and psychiatric disorders. Second, because both types of work-family conflict are related to adverse mental health outcomes and represent prevalent sources of work-related stress for both men and women (e.g., Eagle et al., 1997; Frone et al., 1992b), more attention needs to be devoted to strategies for coping with or reducing exposure to both types of work-family conflict. It is likely that many family-supportive programs or coping strategies have a primary impact on only one of the two forms of work-family conflict. To date, little systematic research has been devoted to the issue of managing work-family conflict.

In terms of practical implications, the present results suggest that employers should not overlook work-to-family and family-to-work conflict as significant sources of stress in the lives of employed men and women. Not only is work-family conflict related to elevations in general psychological distress, as documented in past research, the present study shows that work-family conflict is positively related to having a much more severe psychiatric disorder. Although a few, mostly large, progressive companies have begun to examine employee needs relative to the work-family interface, these efforts do not affect the vast majority of employed adults (e.g., Kraut, 1990; Shellenbarger, 1993; Starrels, 1992). The self-rated importance of having access to family-supportive programs (e.g., flextime, child care assistance) is positively related to family-to-work conflict but not to work-to-family conflict among employed parents (Frone & Yardley, 1996). Thus, employed parents seem primarily concerned with the adverse impact of family responsibilities on organizational outcomes. This concern is consistent with the present finding that family-to-work conflict was more strongly related to psychiatric disorders than work-to-family conflict was. Of course, simply developing strategies and programs to reduce either type of work-family conflict is not enough. Corporate cultures also must change so that employees feel comfortable taking advantage of the available resources (Friedman, 1990; Starrels, 1992).

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