

# Work-family Balance and Marital Satisfaction: The Mediating Effects of Mental and Physical Health

Society and Mental Health 2017, Vol. 7(3) 175–195 © American Sociological Association 2017 DOI: 10.1177/2156869317713069 journals.sagepub.com/home/smh



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#### **Abstract**

Applying the stress-divorce model to explain the impact of spillover stress, this study analyzes 1,961 married participants in the National Study of the Changing Workforce. Specifically, it tests the individual and combined effects of work-to-family conflict, family-to-work conflict, work-to-family enrichment, and family-to-work enrichment on marital satisfaction. Additionally, this study tests whether these effects are mediated by mental and physical health. The results suggest that mental health and physical health both fully mediate the effect of work-to-family conflict, while mental health and physical health both partially mediate the effect of work-to-family enrichment on marital satisfaction. On the other hand, neither of the health measures mediates the effects of family-to-work conflict and family-to-work enrichment on marital satisfaction. These results suggest the importance of examining both the positive and the negative aspects of work-family balance in understanding marital satisfaction and highlight the mediating effects of mental and physical health in shaping how work-family balance affects marital satisfaction.

# **Keywords**

work-to-family conflict, work-to-family enrichment, family-to-work conflict, family-to-work enrichment, marital satisfaction

Work and family are considered two separate domains that influence each other in both positive and negative ways (Brockwood 2007). Moreover, as previous scholars have argued, the relationship between work and family is reciprocal: Work can negatively affect family (i.e., work-to-family conflict), and family can negatively affect work (i.e., family-to-work conflict) (Hill 2005; Minnotte, Minnotte, and Bonstrom 2015; Voydanoff 2007). Some prior research that has examined the impact of work-family conflict has focused on work outcomes, such as job satisfaction (Allen et al. 2000; Anderson, Coffey, and Byerly 2002; see review by Kossek and Ozeki 1998) and work engagement (Halbesleban, Harvey, and Bolino 2009; Montgomery et al. 2003), whereas some other research has focused on how work-family conflict might affect nonwork outcomes, such as marital satisfaction (Allen et al. 2000; Amstad et al. 2011; Voydanoff 2005) and well-being (Mauno, Kinnunen, and Ruokolainen 2006). This study focuses on marital satisfaction. In order to show how work can affect family outcomes, some research has used spillover stress theory, which argues that an individual's experiences in

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one domain (e.g., work) are transferred and therefore interfere with the individual's other domains (e.g., family) (Eby et al. 2005). Most studies have assumed that the work-family relationship is negative. However, work can positively affect family (i.e., work-to-family enrichment), and family can positively affect work (i.e., family-to-work enrichment). Similarly, several studies of the negative aspects of work-family relationships have suggested that work-to-family conflict and family-to-work conflict are both negatively associated with marital satisfaction (Amstad et al. 2011; Minnotte, Gravelle, and Minnotte 2013), but the literature on the effects of these positive relationships (i.e., work-to-family enrichment and/or family-towork enrichment) on job satisfaction, family satisfaction, and overall well-being is less developed (Hill 2005; Jaga and Bagraim 2011; van Steenbergen, Ellemers, and Mooijaart 2007).

Ongoing scholarly interest in this relationship has a lot of significance for work-family literature and contemporary society, as many married people also have jobs. Given the difficulty of balancing work and family responsibilities in today's 24/ 7 economy, it is very important to investigate the influence of work on family life. Prior research has found evidence for a positive relationship between high marital satisfaction and several positive outcomes, including better personal wellbeing and better family well-being (see the review by Proulx, Helms, and Buehler 2007; see also Kiecolt-Glaser and Newton 2001; Wilcox et al. 2005). On the other hand, marital dissatisfaction has been linked to lower life satisfaction, lower self-esteem, and higher marital instability (Brown, Manning, and Payne 2015; Croyle and Waltz 2002; Fergusson and Horwood 2001; Hawkins and Booth 2005). Therefore, it is important to understand the factors that contribute to long-term, satisfying marriages. With this in mind, this study examines the impact of work-family balance on marital satisfaction. Specifically, by examining both negative and positive influences of work on family life (i.e., work-tofamily conflict and work-to-family enrichment, respectively) and family on work life (i.e., familyto-work conflict and family-to-work enrichment, respectively) on marital satisfaction, and by addressing mediators of these relationships, the model in the present study will be more complete than those models previous studies have presented.

In the empirical literature to date, only a few studies have examined the effects of both workto-family conflict and work-to-family enrichment simultaneously, and even fewer have tested these effects in both directions (Gareis et al. 2009; Grzywacz and Bass 2003; Schenewark and Dixon 2012; van Steenbergen et al. 2007). Specifically, the present study will test a model that shows how experiences of work-to-family (and familyto-work) conflict and work-to-family (and family-to-work) enrichment will affect marital satisfaction. Applying the stress-divorce model proposed by Bodenmann (1995, 2000) to explain the impact of spillover stress, this study predicts that both work-to-family (and family-to-work) conflict and work-to-family (and family-to-work) enrichment will affect marital satisfaction directly and also affect it indirectly through their effects on mental and physical health. Specifically, this study asks the following questions: (1) Do work-tofamily conflict and family-to-work conflict have an effect on marital satisfaction? (2) Do work-tofamily enrichment and family-to-work enrichment have an effect on marital satisfaction? (3) Are these effects mediated by mental and physical health?

## THEORETICAL FRAMEWORK

Researchers have identified two models that suggest that demands or strains in one domain (e.g., work) are carried over to other domains (e.g., family) (Bolger et al. 1989). Specifically, spillover is defined as the transmission of strain in one domain of an individual's life to another, such as strain from work transferring to family (Bakker, Demerouti, and Burke 2009; Geurts and Demerouti 2003). Crossover also involves transmission of strains from one domain to another, but in this case the strains cross over between closely related persons (Bakker et al. 2009; Westman 2001). This study conceptualizes one's own work-to-family (and family-to-work) conflict as a form of spillover stress. Many studies have found support for spillover effects (Bakker et al. 2009; see also the meta-analyses by Allen et al. 2000; Amstad et al. 2011; and Ford, Heinen, and Langkamer 2007).

Extensive literature shows support for the negative relationship between minor stress and relationship satisfaction and stability (see the overview by Randall and Bodenmann 2009; see also Bodenmann 2000, 2005; Story and Bradbury 2004). This study uses the stress-divorce model proposed by Bodenmann (1995, 2000). As Randall and Bodenmann (2009:108) stated, "while other

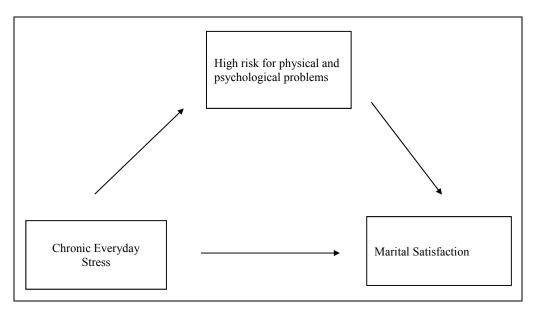


Figure 1. Adapted from Bodenmann's stress-divorce model (Randall and Bodenmann 2009:108).

stress models mainly express external stress, Bodenmann's model is primarily interested in the impact of external stress on internal stress (e.g., less time together, negative communication, poor health outcomes, etc.) that in turn is associated with poorer relationship quality." According to the definitions in prior research, internal stress is stress that originates within the individual and/or the couple (Bodenmann et al. 2006), while external stress originates outside a close relationship. External stressors, such as workplace and financial stress, create tensions between individuals and their social environments, and this stress may eventually spill over to the couple. On the other hand, internal stressors more intimately involve individuals and their relationships with their partners. Some examples are stress related to health issues, worries about a partner as he or she goes through a difficult time, and relational conflicts and tensions that occur between partners (Randall and Bodenmann 2009). This model mainly focuses on the impact of minor external stress on relationship outcomes, rather than evaluating major critical life events.

According to this model, stress is hypothesized to affect marital satisfaction through several mechanisms, such as less time spent together, low quality of marital interaction (i.e., less positive interaction and more negative interaction such as withdrawal), higher risk for physical and psychological problems (such as sleep disorders,

depression, and poor physical health), and increased likelihood of expressing problematic personality traits between spouses (e.g., rigidity, anxiety, and hostility) (Randall and Bodenmann 2009). Several studies have provided empirical evidence for the stress-divorce model by testing the effect of stress on marital satisfaction (Bodenmann 2000; Bodenmann and Cina 2006; Bodenmann, Ledermann, and Bradbury 2007; Falconier, Nussbeck, and Bodenmann 2013; Frye and Karney 2006; Ledermann et al. 2010; Neff and Karney 2004; Repetti, Wang, and Saxbe 2009).

This study applies the stress-divorce model to test the effect of work-family balance on marital satisfaction (i.e., spillover stress) while also testing the mediating effect of physical and mental health (see Figure 1). Specifically, this study conceptualizes work-family imbalance in terms of chronic daily external stress, while physical and mental health problems are conceptualized as internal stress. Using the stress-divorce model, the negative aspects of work-family balance (i.e., work-to-family conflict and family-to-work conflict) are expected to increase the risk of physical and mental health problems and thus reduce marital satisfaction. Similarly, the positive aspects of workfamily balance (i.e., work-to-family enrichment and family-to-work enrichment) are expected to decrease the risk of physical and mental health problems, thereby improving marital satisfaction.

# WORK-TO-FAMILY CONFLICT, FAMILY-TO-WORK CONFLICT, AND MARITAL SATISFACTION

As mentioned above, much research has focused on the negative side of the work-family interface. By combining work and family responsibilities, individuals can experience work-to-family conflict. Prior research has defined work-to-family conflict as "inter-role conflict that occurs when the demands of work make it difficult to attend to family needs" (Minnotte et al. 2010:426). For example, working hard to meet a deadline at work may reduce the amount of time a parent spends with his or her spouse and children. This definition indicates that the conflict is bidirectional in nature: Work can conflict with family life and vice versa. Work-to-family conflict has also been negatively related to marital satisfaction (Hill 2005; Voydanoff 2005), which has been supported in some meta-analyses (Amstad et al. 2011).

Following Minnotte et al. (2015:22) and other scholars, family-to-work conflict is defined here "as a form of role conflict that occurs when experiences in the family result in negative experiences in the work domain, including difficulty attending to work responsibilities (Bellavia and Frone 2005; Frone, [Russell, and Cooper 1992a, 1992b]; Schieman and Young 2011)." For example, marital arguments between spouses may create more difficulty in concentrating at work and therefore reduce one's overall productivity. The source of the family-to-work conflict (conceptualized as a family stressor) starts within the family domain and is therefore more closely connected to the family domain, particularly compared to work stressors such as work-to-family conflict (Minnotte et al. 2013). Consistent with the family stress theory proposed by Hill (2005), family-to-work conflict is conceptualized as a family stressor that can negatively affect marital satisfaction. Despite the fact that the literature on family-towork conflict is understudied compared to workto-family conflict, there is empirical evidence from many prior studies that family-to-work conflict reduces marital satisfaction (Galovan et al. 2010; Hill 2005; Minnotte et al. 2013; Minnotte et al. 2015; Voydanoff 2005). This has been supported in some meta-analyses (Amstad et al. 2011; Shockley and Singla 2011), though some research suggests that gender ideology moderates

the effect of family-to-work conflict on marital satisfaction (Minnotte et al. 2013).

Hypothesis 1: Higher work-to-family conflict will be associated with lower marital satisfaction.

Hypothesis 2: Higher family-to-work conflict will be associated with lower marital satisfaction

# WORK-TO-FAMILY ENRICHMENT, FAMILY-TO-WORK ENRICHMENT, AND MARITAL SATISFACTION

Most prior research focuses on the negative aspect of work-family balance (i.e., work-family conflict and family-work conflict), which undermines the possibility that work and family might also affect each other positively (Donald and Linington 2008; Hanson, Hammer, and Colton 2006). Compared to the negative aspect of work-family balance, the positive impact of work on family (and vice versa) has been understudied within the work-family literature (Carlson, Grzywacz, and Zivnuska 2009; Frone 2003; Greenhaus and Powell 2006). Workto-family enrichment is defined as "how family roles benefit from work roles through developmental resources, positive affect, and psychosocial capital derived from involvement in work" (Siu et al. 2010:471). For example, a promotion at work might improve one's mood at work, which is then carried over to family life and thus enhances the quality of one's performance at home (Carlson et al. 2006). This definition of work-tofamily enrichment indicates that enrichment is bidirectional in nature: work can enrich one's family life and vice versa. Prior studies found that work-to-family enrichment significantly predicted home performance, home commitment, home satisfaction, and global life satisfaction (van Steenbergen et al. 2007) as well as marital satisfaction (van Steenbergen, Kluwer, and Karney 2014).

Similarly, family-to-work enrichment is defined as "how work roles benefit from family roles through developmental resources, positive affect, and gains in efficiency derived from involvement in family" (Siu et al. 2010:471). For example, skills learned in childrearing such as listening to or being patient with a child may lead to an improvement in supervisory or managerial

skills. The source of family-to-work enrichment originates within the family domain, so it is more closely connected to the family domain than resources that originate at work, such as work-to-family enrichment. Consistent with family stress theory (Hill 2005), family-to-work enrichment is conceptualized as a family resource that can positively affect marital satisfaction. There is empirical evidence from prior research that family-to-work enrichment is positively related to marital satisfaction (Hill 2005) and family satisfaction (Boyar and Mosley 2007; Carlson et al. 2006; Jaga and Bagraim 2011).

Hypothesis 3: Higher work-to-family enrichment will be associated with higher marital satisfaction.

Hypothesis 4: Higher family-to-work enrichment will be associated with higher marital satisfaction

A few studies have assessed both work-family enrichment and work-family conflict simultaneously (Hill 2005; van Steenbergen et al. 2007; van Steenbergen et al. 2014; Voydanoff 2005) or both family-work enrichment and family-work conflict simultaneously (Hill 2005; Schenewark and Dixon 2012; van Steenbergen et al. 2007). The results, however, are not consistent. Some studies found that only work-family conflict was related to decreased marital satisfaction in individuals (Hill 2005; Voydanoff 2005). Examining the effects of work-family enrichment and workfamily conflict on various outcomes, van Steenbergen et al. (2007) found that work-family enrichment significantly and substantially improved the prediction of home performance, home commitment, home satisfaction, and global life satisfaction. These effects were found to be stronger than the effects of work-family conflict. This finding was supported in other research (van Steenbergen et al. 2014). Behavioral family-work enrichment predicted higher home performance among women, whereas psychological family-work enrichment predicted higher home performance, home commitment, home satisfaction, and global life satisfaction among men (van Steenbergen et al. 2007).1 Family-work enrichment predicted higher marital satisfaction (Hill 2005) as well as life satisfaction (Schenewark and Dixon 2012).

To extend these findings, a handful of studies have explored the bidirectional effects of both work-family conflict and work-family enrichment (Gareis et al. 2009; Grzywacz and Bass 2003; Schenewark and Dixon 2012; van Steenbergen et al. 2007). These studies, however, have some limitations, including small sample sizes and failure to test the mediating mechanisms in these relationships. In order to better understand the relationships between work-family (and family-work) conflict, work-family (and family-work) enrichment, and marital satisfaction, this study tests the mediating effects of mental and physical health.

# MEDIATING EFFECTS OF MENTAL AND PHYSICAL HEALTH

In order to understand how work-family balance affects marital satisfaction, it is important to map the factors that mediate the relationship between work-family balance and marital satisfaction. Guided by evidence from the stress-divorce model proposed by Bodenmann (1995, 2000), this study highlights mental and physical health as important potential mediators. According to this theory, chronic external stress (work-family conflict) is expected to affect marital satisfaction directly through an increase in internal stress (higher risk for psychological and physical problems).

Some prior research has tested the effects of work-family conflict or family-work conflict on mental health (Symoens and Bracke 2015; Wang et al. 2007). Wang et al. (2007) found that people with high work-family conflict had a significantly higher rate of mental disorders and/or substance use-related disorders than those who reported low work-family conflict. Only a few published articles have examined the effect of positive work-family relationships (i.e., work-to-family enrichment and family-to-work enrichment) on mental health, specifically depression (Grzywacz and Bass 2003; Hammer et al. 2005; Nitzsche et al. 2013; van Steenbergen et al. 2007). Specifically, some prior research found a negative relationship between work-to-family (and family-to-work) enrichment and depression (Hammer et al. 2005), whereas other studies found mixed results (Grzywacz and Bass 2003). Grzywacz and Bass (2003) reported that higher family-to-work enrichment predicted lower depression; they found no such relationship between work-to-family enrichment and depression.

Past research has also uncovered a negative relationship between work-family (or familywork) conflict and physical health. Prior research found that family-work conflict predicted depression, poor physical health, and incidence of hypertension (Frone, Russell, and Cooper 1997), while work-to-family conflict also predicted poor physical health and heavy alcohol use (Frone, Russell, and Barnes 1996). Only a few studies have examined the effects of work-family and family-work enrichment on physical health. Grzywacz (2000) found that higher work-family and family-work enrichment were positively associated with better mental and physical health and well-being and negatively associated with chronic health problems. Prior research found evidence that both poor mental and poor physical health are associated with lower marital satisfaction (Davila et al. 2003; Galinsky and Waite 2014; Whisman 2001).

All this research supports the connections among work-to-family (or family-to-work) conflict, work-to-family (or family-to-work) enrichment, mental and physical health, and marital satisfaction. Moreover, there is evidence from prior research that work stressors affect marital functioning such as marital satisfaction via their effect on individual well-being (see the overview by Mauno and Kinnunen 1999). Using data from 215 dual-earner married or cohabiting couples in Finland, Mauno and Kinnunen (1999) used the spillover hypothesis to test the mediating effects of mental and physical health in the relationship between job stressors and marital satisfaction. The authors predicted that job stressors would initially affect an individual's well-being in the work domain, which then extends to overall well-being and finally family well-being. The results supported this hypothesis: The negative impact of job stressors (except for job autonomy) spilled over into marital satisfaction, and this relationship was mediated by job exhaustion and psychosomatic health for both men and women. In another study, using a sample of 190 employed married people, Barling and MacEwen (1992) found that three work stressors (ambiguity, conflict, and job insecurity) specifically affected marital satisfaction; all three stressors were mediated by concentration and depression.

The mediating effect of mental health was also supported in some longitudinal studies. Using longitudinal data from 337 couples living in the rural Midwest, Matthews, Conger, and Wickrama (1996) tested the effect of work-family conflict on marital quality and marital stability as well as

the mediating effects of psychological distress and quality of marital interaction. The results showed that work-family conflict was positively related to the psychological distress of each spouse. Moreover, psychological distress was found to affect marital outcomes both directly and indirectly through greater marital hostility and less marital warmth and supportiveness. As the authors acknowledged, this study had some limitations. The sample was exclusively white and rural and was limited to intact families having a seventh-grade child. Moreover, all couples in the sample had been married for at least 14 years. These sample characteristics make it harder to generalize the authors' findings to the larger population. Moreover, the study evaluated only the negative aspect of work-family balance (i.e., work-to-family conflict) without considering the bidirectional effect (i.e., family-to-work conflict) or the positive aspect of work-family balance (i.e., work-family enrichment). Finally, the study used only a general measure of work-to-family conflict, measured by asking the respondents and their spouses how much they agreed or disagreed that their jobs interfered with their family life.

The present study improves on the study by Matthews et al. (1996) in several ways. First, it uses a more representative sample. Second, this study considers family-to-work conflict as well as work-family enrichment in both directions. Moreover, this study uses a more specific and detailed measure to capture different dimensions of work-to-family conflict, such as strain-based and energy-based work-to-family conflict (created by a scale of five items) (Kalliath, Kalliath, and Chan 2015; van Steenbergen et al. 2014). Finally, by conceptualizing physical health as an internal stressor as part of the stress-divorce model (Randall and Bodenmann 2009), and consistent with the support from prior research on the relationship between work-family conflict and physical health (Mauno et al. 2006), this study also considers physical health as a mediator in the relationship between work-family conflict and marital satisfaction.

Altogether, the stress-divorce model and findings from prior research lead to the following hypotheses:

Hypothesis 5a: Mental health will mediate the relationship between work-to-family conflict and marital satisfaction as well as the relationship between work-to-family enrichment and marital satisfaction.

Hypothesis 5b: Mental health will mediate the relationship between family-to-work conflict and marital satisfaction as well as the relationship between family-to-work enrichment and marital satisfaction.

Hypothesis 6a: Physical health will mediate the relationship between work-to-family conflict and marital satisfaction as well as the relationship between work-to-family enrichment and marital satisfaction.

Hypothesis 6b: Physical health will mediate the relationship between family-to-work conflict and marital satisfaction as well as the relationship between family-to-work enrichment and marital satisfaction.

## DATA AND METHODS

# Sample

The latest wave (year 2008) from the National Study of the Changing Workforce (NSCW) is used to address the research questions. The questionnaire utilized was developed by the Families and Work Institute, whereas the actual data for the 2008 NSCW were collected by Harris Interactive, Inc. Interviews (N = 3,502), which lasted about 50 minutes on average, were conducted over the telephone between November 2007 and April 2008 (Families and Work Institute 2008). A random-digit-dialing method was used to obtain a nationally representative sample of employed adults. Study eligibility was limited to

people who 1) worked at a paid job or operated an income-producing business, 2) were 18 years or older, 3) were employed in the civilian labor force, 4) resided in the contiguous 48 states, and 5) lived in a non-institutional residence—i.e., household—with a telephone. In households with more than one eligible person, one was randomly selected to be interviewed. (Families and Work Institute 2008:3)

Of the total sample of 3,502 interviewed individuals, 2,769 were "wage or salaried workers who work for someone else, while 733 respondents worked for themselves: 255 business owners who employ others, and 478 independent self-employed workers who do not employ anyone else" (Families and Work Institute 2008:5). For the present study, only respondents who reported

being legally married and those who were between 18 and 64 years old were included in the analysis. A total of 1,971 were identified as being married and in this age group: 1,020 men and 951 women.

# **MEASURES**

# Dependent Variable: Marital Satisfaction

To measure marital satisfaction, respondents are asked the following question: "All in all, how satisfied would you say you are with your marriage?" This measure has been used in prior research (Minnotte et al. 2015). The answer categories range from *extremely satisfied* (1) to *not too satisfied* (4). This question is reverse coded so that higher scores indicate greater satisfaction with marriage.

# Main Independent Variables: Work-tofamily Conflict, Work-to-family Enrichment, Family-to-work Conflict, and Family-to-work Enrichment

One of the independent variables is work-tofamily conflict. This study used the same index of five items that has been used in some prior research (Hill 2005; Minnotte et al. 2015; Voydanoff 2005). Respondents were asked to respond to the following questions:

(a) In the past 3 months, how often have you not had enough time for your family or other important people in your life because of your job? (b) In the past 3 months, how often has work kept you from doing as good a job at home as you could? (c) In the past 3 months, how often have you not had the energy to do things with your family or other important people in your life because of your job? (d) In the past 3 months, how often has your job kept you from concentrating on important things in your family or personal life? and (e) In the past 3 months, how often have you not been in as good a mood as you would like to be at home because of your job?

Respondents were presented with response categories ranging from 1 = very often 5 = never.

The responses were first reverse-coded and then summed and averaged to create an index, with higher scores indicating higher levels of work-to-family conflict. The Cronbach's alpha was .86, showing high internal reliability.

The second independent variable is work-to-family enrichment. Work-to-family enrichment was measured with an index of two items. Respondents were asked to respond to the following two questions:

(a) In the past three months, how often have you had more energy to do things with your family or other important people in your life because of your job? (b) In the past three months, how often have you been in a better mood at home because of your job?

Responses to these questions ranged from 1 = very often to 5 = never. The responses were first reverse-coded and then summed and averaged to create an index, with higher scores indicating higher levels of work-to-family enrichment.

In addition, this study evaluates family-towork conflict, using the same index of five items that has been used in prior research (e.g., Minnotte et al. 2015; Zhao, Qu, and Ghiselli 2011). Respondents were asked to respond to the following questions:

(a) How often have you NOT been in as good a mood as you would like to be at work because of your personal or family life? (b) How often has your family or personal life kept you from doing as good a job at work as you could? (c) In the past three months, how often has your family or personal life drained you of the energy you needed to do your job? (d) How often has your family or personal life kept you from concentrating on your job? And (e) How often have you not had enough time for your job because of your family or personal life?

Respondents were presented with response categories ranging from 1 = very often to 5 = never. The responses were first reverse-coded and then summed and averaged to create an index, with higher scores indicating higher levels of family-to-work conflict. The Cronbach's alpha was .82, showing high internal reliability.

Finally, this study assesses family-to-work enrichment. Family-to-work enrichment was measured with an index of two items. Respondents were asked to respond to the following questions: "(a) In the past three months, how often have you been in a better mood at work because of your personal or family life? (b) In the past three months, how often have you had more energy to do your job because of your family or personal life?" Responses to these questions ranged from 1 = very often to 5 = never. Responses to these questions were first reverse-coded and then summed and then averaged to create an index, with higher scores indicating higher levels of family-to-work enrichment.

# Mediating Variables: Mental and Physical Health

Mental health is defined as "a state of emotional, psychological and social well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community" (World Health Organization 2014). NSCW created an index of mental health that is based on seven measures that have been used in prior psychiatric and medical research and that captures different dimensions of stress, coping, and depression (Beutell 2013; Bond and Galinsky 2006; Bond et al. 2005). Respondents were asked to respond to the following questions:

In the last month, how often have you (a) been bothered by minor health problems such as headaches, insomnia, or stomach upsets? (b) had trouble sleeping to the point that it affected your performance on and off the job? (c) have you felt nervous and stressed? (d) have you felt that you were unable to control the important things in your life? (e) have you felt that difficulties were piling up so high that you could not overcome them?

Two additional questions were asked: (f) "During the past month, have you been bothered by feeling down, depressed, or hopeless?" and (g) "During the past month, have you been bothered by little interest or pleasure in doing things?" Responses to the first five questions ranged from 1 = never to 5 = very often. The last two questions were

coded as dummy variables (1 = yes, 0 = no). Due to these seven items' having different numbers of response categories, all seven items were standardized, summed, and then averaged to create an index, with higher scores indicating worse mental health. The Cronbach's alpha was .80, showing high internal reliability.<sup>3</sup>

The validity of the mental health scale was tested using a similar approach as in Yucel and Downey (2010). First, the study employs exploratory factor analysis, using a principal-factor method followed by a varimax rotation. Based on the varimax rotation, this study retained items with factor loadings that were 0.50 and higher. The decision to retain the number of indicators and factors was based not only on the factor loadings but also on whether the indicators retained could be interpreted meaningfully under each factor. As a result of the exploratory factor analysis, all seven items for mental health were retained and loaded well with the latent construct for mental health. These seven items and the latent construct were then tested by confirmatory factor analysis, where the measurement model is further tested by the goodness of fit indices. The results suggest that all seven indicators load significantly by the latent construct (p < .001), and a high percentage of the variance in these indicators is explained by the latent construct ( $R^2 = 43-92$  percent). The other fit indices also suggest that this measurement model fits the data well (RMSEA = 0.03, CFI = 0.96).

Physical health was measured with one question. This single-item measure of physical health has been used in prior research (Beutell 2013). Respondents were asked to respond to the following question: "How would you rate your current state of health—excellent, good, fair, or poor?" Responses to this question ranged from 1 = excellent to 4 = poor. The item is reverse-coded, with higher scores indicating better physical health.

## Control Variables

Associations between marital satisfaction and work-to-family conflict, work-to-family enrichment, family-to-work conflict, and family-to-work enrichment may not represent causal relationships. Therefore, it is crucial to account for background and relationship-specific factors that are potentially related to marital satisfaction (Roehling, Jarvis, and Swope 2005; Schieman, Milkie, and Glavin 2009; Twenge, Campbell, and Foster 2003; Voydanoff 2005, 2007; Zvonkovic, Notter, and Peters 2006).

Consistent with this argument and with prior studies, this study controls for the following variables: presence of preschool children living in the household, gender, log of gross annual family income (due to skewness), hours worked per week, working shift schedule, employed spouse, education, race, age, and been married before.

# Analytical Strategy

This study addressed the research questions by using path analysis through Structural Equation Modeling (SEM) in Amos 22. Due to high multicollinearity between work-to-family conflict and family-to-work conflict, as well as between work-to-family enrichment and family-to-work enrichment, work-to-family conflict and work-tofamily enrichment are added together in separate models from family-to-work conflict and familyto-work enrichment. In the first step, the model tests the zero-order effects of work-to-family conflict and work-to-family enrichment (and in a separate model, the zero-order effects of family-towork conflict and family-to-work enrichment) on marital satisfaction. Next, model 2 adds the control variables. Model 3 tests whether mental health mediates the effects of work-to-family conflict and work-to-family enrichment (and family-towork conflict and family-to-work enrichment) on marital satisfaction. Model 4 tests whether physical health mediates the effects of work-to-family conflict and work-to-family enrichment (and familyto-work conflict and family-to-work enrichment) on marital satisfaction. At each step, the total variance in marital satisfaction is reported by  $R^2$ . This shows us how much of the variance in marital satisfaction is explained by each group of predictors.

The incomplete data were analyzed using maximum likelihood estimation as part of SEM. This method uses available data to compute maximum likelihood estimates and does not involve any data imputation. Instead, it estimates values of the parameters in the model that define the distribution in a way that most likely would have resulted in the observed data (Allison 2003). This approach allows the analysis of all the data from 1,971 workers.

## RESULTS

# Descriptive Results

Table 1 presents the descriptive statistics for the dependent variable along with all the independent

Table I.	Descriptive Star	tistics of All	Variables from	National	Study of t	ne Changing	Workforce 2008
Data.							

Variable	Mean/percentage <sup>a</sup>	Standard deviation <sup>b</sup>	Metric	
Dependent variable				
Marital satisfaction	2.85	0.76	I <del>-4</del>	
Independent variable				
Work-family conflict	2.52	0.83	I-5	
Work-family enrichment	2.75	0.92	I-5	
Family-work conflict	2.10	0.66	I-5	
Family-work enrichment	3.16	0.87	I <i>-</i> 5	
Control variable				
Preschool child living in the household	0.24	_	0-1	
Socioeconomic status (log of family income)	11.38	0.76	2.20-15.69	
Hours of employment	41.90	12.87	2-90	
Shift work schedule	0.24	_	0-1	
Spouse is employed	0.75	_	0–1	
Less than high school degree	0.21	_	0-1	
Some college	0.20	_	0-1	
Bachelor's degree	0.33	_	0-1	
Higher than bachelor's degree	0.26	_	0-1	
White (reference)	0.88	_	0-1	
Black	0.05	_	0-1	
Other race	0.07	_	0-1	
Male	0.52	_	0-1	
Age	46.70	10.29	18–64	
Have been married before	0.25	_	0–1	
Mental health	-0.18	0.89	-1.57-3.04	
Physical health	2.16	0.68	I-3	

<sup>&</sup>lt;sup>a</sup>Means are reported for continuous variables and percentages are reported for binary variables.

and control variables. Based on Table 1, respondents in this sample reported an average score of 2.85 for marital satisfaction on a scale ranging from 1 to 4. The work-to-family conflict and family-to-work conflict measures had an average score of 2.52 and 2.10, respectively, on a scale ranging from 1 to 5 for both. Finally, on the five-point scales for work-to-family and familyto-work enrichment, the average scores were 2.75 and 3.16, respectively. The sample is 88 percent white and 5 percent black, and 7 percent of respondents belong to another race. On average, respondents in the sample are 47 years of age. Around 59 percent of the sample has at least a bachelor's degree, while 24 percent of the sample has preschool children living in the household. On average, the respondents report good health. Around 52 percent of the sample is male, and 48 percent is female. On average, respondents work

42 hours per week, and around 24 percent of the sample has a shift work schedule.

Table 2 presents the bivariate correlations for the variables. As shown, there is high correlation between work-family conflict and family-work conflict as well as between work-family enrichment and family-work enrichment. In order to test for potential issues of multicollinearity, variance inflation factors were determined for the independent variables. The results showed some symptoms of multicollinearity, with the variance inflation factors of work-family conflict and family-work enrichment being more than 2. Therefore, the analyses that track the effects of work-family conflict and work-family enrichment are run separately from the analyses that track the effects of family-work conflict and family-work enrichment (see Tables 3 and 4, respectively). The bivariate correlations suggest that work-to-family and family-to-work conflict are negatively correlated

bStandard deviations are only reported for continuous variables.

Table 2. Paired Bivariate Correlations between All Variables Used in the Analysis.

Variable	ΧI	X2	X3	X4	X5	X6	
XI. Marital satisfaction	_						
X2. Work to family conflict	17***	_					
X3. Work to family enrichment	.12***	23***	_				
X4. Family to work conflict	24***	.53***	03	_			
X5. Family to work enrichment	.22***	05*	.51***	09***	_		
X6. Presence of preschool children	.04	.10***	02	.08***	.01	_	
living in the household							
X7. Male	.08***	.05*	05*	05*	.01	.12***	
X8. Log of annual family income	.03	01	.01	.01	00	05*	
X9. Hours worked per week	.04	.24***	05*	.02	.02	.04	
X10. Working shift schedule	02	.01	.09***	.03	.06**	.03	
XII. Spouse is employed	02	.01	00	.02	.05*	08**	
X12. Less than high school degree	00	04	.03	05*	0 I	08***	
X13. Some college	03	.00	02	02	04	0 I	
X14. Bachelor's degree	.01	02	02	.01	.02	.06**	
X15. Having more than bachelor's degree	.02	.05*	.00	.05*	.02	.02	
X16. Being white	.03	.02	03	.02	05*	0 I	
K17. Black	02	03	.03	02	.00	03	
X18. Other	03	00	.01	0 I	.06**	.04	
X19. Age of the respondent	02	13***	.04	09***	04	50***	
X20. Being married before	04	.02	.02	.03	0 I	10***	
X21. Mental health	29***	.40***	20***	.42***	16***	.02	
X22. Physical health	.12***	19***	.10***	15***	.10***	.03	
Variable	X7	X8	X9	XI0	XII	XI2	XI3
X7. Male	_						
X8. Log of annual family income	.02	_					
X9. Hours worked per week	.27***	.13***	_				
X10. Working shift schedule	.04	03	03	_			
XII. Spouse is employed	17***	.20***	07**	.00	_		
K12. Less than high school degree	02	21***	02	.03	08***	_	
X13. Some college	02	13***	01	.06**	01	26***	
X14. Bachelor's degree	03	.02	04	02	.05*	36***	35***
XI5. Having more than bachelor's degree	.06**	.29***	.07**	06**	.03	30***	30***
K16. Being white	.01	.06**	01	04	.01	05*	01
X17. Black	02	10***	.03	.02	03	.05*	.00
XI8. Other	00	.01	01	.03	.01	.01	.01
K19. Age of the respondent	03	.12***	05*	00	06**	.03	03
X20. Being married before	02	01	.01	.05*	.03	.09***	.02
K21. Mental health	12***	09***	03	.03	.02	.05*	.01
X22. Physical health	03	15***	.01	01	.04	12***	07**
Variable	XI4	XI5	XI6	XI7	XI8	XI9	X20
X14. Bachelor's degree	_						
XI5. Having more than bachelor's degree	41***	_					
X16. Being white	01	.07**					
X17. Black	01	04	63***				
XI8. Other	.03	05*	73***	06**	_		
X19. Age of the respondent	08***	.08***	.07**	02	07**	_	
X20. Being married before	06**	03	.03	02 .01	07 04	.23***	_
X21. Mental health	00 01	05*	.03 –.01	.01	.00	09***	.02
X22. Physical health	.08***	.09***	.04	04	02	05*	06**
CLL. I Ilysical ficaldi							
<u> </u>	X21	X22					
Variable  X21. Mental health	X2I —	X22					

<sup>\*</sup>p < .05. \*\*p < .01. \*\*\*p < .001 (two-tailed tests).

**Table 3.** Path Analysis Predicting Marital Satisfaction and the Mediating Effects of Mental and Physical Health.

	Model I	Model 2	Model 3	Model 4	Model 5	Model 6
	b (SE)	b (SE)	b (SE)	b (SE)	b (SE)	b (SE)
Main independent variable						
Work-to-family conflict	138***	158***	038	038	038	038
,	(.021)	(.021)	(.023)	(.023)	(.020)	(.023)
Work-to-family enrichment	.070***	.076***	.054**	.054**	.054**	.054**
	(.019)	(.019)	(.019)	(810.)	(.019)	(810.)
Control variable						
Preschool child living in the household		.039	.036	.036	.035	.036
		(.050)	(.049)	(.049)	(.049)	(.049)
Male		.106**	.065	.065	.065	.065
		(.036)	(.035)	(.035)	(.035)	(.035)
Log of annual family income		.012	00 I	00 I	00 I	00 I
		(.025)	(.024)	(.024)	(.024)	(.024)
Hours worked		.003**	.002	.002	.002	.002
		(100.)	(100.)	(100.)	(100.)	(100.)
Shift schedule		050	034	034	034	034
		(.040)	(.039)	(.039)	(.039)	(.039)
Spouse is employed		003	005	005	006	005
		(.041)	(.040)	(.040)	(.040)	(.040)
Having some college degree		035	056	056	057	056
		(.053)	(.051)	(.051)	(.051)	(.051)
Having bachelor's degree		.005	022	022	022	022
		(.048)	(.047)	(.047)	(.047)	(.047)
Having more than bachelor's degree		.021	019	019	019	019
		(.053)	(.051)	(.051)	(.051)	(.051)
Black		092	074	074	074	074
		(.077)	(.075)	(.075)	(.075)	(.075)
Other race		090	089	089	088	089
		(.067)	(.066)	(.066)	(.066)	(.066)
Age		002	002	002	002	002
		(.002)	(.002)	(.002)	(.002)	(.002)
Having been married before		050	044	044	044	044
		(.040)	(.039)	(.039)	(.039)	(.039)
Mediating variable						
Mental health			214***	214***		
			(.022)	(.022)		
Physical health					.150***	.150***
					(.038)	(.038)
Work-to-family conflict → mental health			.463***			
			(.021)			
Work-to-family enrichment → mental health				300**		
				(.103)		
Work-to-family conflict → physical health					200***	
					(.050)	
Work-to-family enrichment → physical health						.250**
						(.089)
Chi-square Chi-square	19.703***	193.396***	474.344***	419.385***	500.342***	434.179**
df	I	26	53	53	53	53
CFI	.94	.95	.95	.95	.95	.95
RMSEA	.03	.03	.03	.04	.04	.04
$R^2$	.06	.12	.20	.20	.16	.16

<sup>\*\*</sup>p < .01. \*\*\*p < .001 (two-tailed test).

with marital satisfaction (b = -.17, p < .001; b = -.24, p < .001, respectively), whereas work-to-family and family-to-work enrichment are positively correlated with marital satisfaction (b = .12, p < .001; b = .22, p < .001, respectively).

# Path Analysis Results

Table 3 shows the results of path analysis models predicting marital satisfaction. Model 1 presents only the zero-order associations of work-to-family conflict and work-to-family enrichment. The

**Table 4.** Path Analysis Predicting Marital Satisfaction and the Mediating Effects of Mental and Physical Health.

	Model I	Model 2	Model 3	Model 4	Model 5	Model 6
	b (SE)	b (SE)	b (SE)	b (SE)	b (SE)	b (SE)
Main independent variable						
Family-to-work conflict	262***	264***	156***	I56***	158***	158***
	(.025)	(.025)	(.028)	(.028)	(.024)	(.024)
Family-to-work enrichment	.176***	.177***	.157***	.157***	.l\27***	.157***
·	(.019)	(.019)	(.019)	(.019)	(.019)	(.019)
Control variable						
Preschool child living in the household		.055	.049	.049	.049	.049
		(.049)	(.048)	(.048)	(.048)	(.048)
Male		*080	.056	.056	.057	.056
		(.035)	(.034)	(.034)	(.034)	(.034)
Log of annual family income		.027	.011	.010	.011	.011
		(.024)	(.024)	(.024)	(.024)	(.024)
Hours worked		.001	.001	.001	.001	.001
		(100.)	(100.)	(100.)	(100.)	(100.)
Shift schedule		045	037	037	038	037
		(.038)	(.038)	(.038)	(.038)	(.038)
Spouse is employed		026	023	023	023	023
		(.040)	(.039)	(.039)	(.039)	(.039)
Having some college degree		034	047	047	048	047
		(.051)	(.050)	(.050)	(.050)	(.050)
Having bachelor's degree		00 I	022	022	022	022
		(.047)	(.046)	(.046)	(.046)	(.046)
Having more than bachelor's degree		.017	011	011	011	011
		(.051)	(.050)	(.050)	(.050)	(.050)
Black		081	075	075	075	075
		(.074)	(.073)	(.073)	(.073)	(.073)
Other race		125	120	120	119	120
		(.065)	(.064)	(.064)	(.064)	(.064)
Age		00 Í	002	002	002	002
		(.002)	(.002)	(.002)	(.002)	(.002)
Having been married before		04Ó	03 <b>7</b>	037	037	037
		(.039)	(.039)	(.039)	(.039)	(.039)
Mediating variable						
Mental health			163***	163***		
			(.022)	(.022)		
Physical health					.019**	.019**
					(.006)	(.006)
Family-to-work conflict → mental health			.599		` ,	` ,
•			(.587)			
Family-to-work enrichment → mental health			` ,	224		
•				(.400)		
Family-to-work conflict → physical health				(	.022	
F.,					(.022)	
Family-to-work enrichment → physical health					()	.034
, , , , , , , , , , , , , , , , , , , ,						(.068)
Chi-square	17.211***	76.572***	273.430***	247.643***	299.100***	268.511***
df	1	26	26	26	26	26
CFI	.95	.98	.96	.95	.95	.96
RMSEA	.03	.03	.03	.04	.04	.04
$R^2$	.12	.18	.26	.26	.27	.27

<sup>\*</sup>p < .05. \*\*p < .01. \*\*\*p < .001 (two-tailed test).

results of model 1 suggest that those who experience more work-to-family conflict have lower marital satisfaction (b = -.138, p < .001), whereas those with more work-to-family enrichment have higher marital satisfaction (b = .070, p < .001). The  $R^2$  of this model is 6 percent.

After adding the control variables in model 2, the effects of work-to-family conflict and work-to-family enrichment are still significant (b = -.158, p < .001; and b = .076, p < .001, respectively). Therefore, hypotheses 1 and 3 are supported. Males report higher marital satisfaction

than do females (b = .106, p < .01). The  $R^2$ increases to 12 percent. Models 3 and 4 test the mediating effect of mental health in explaining the relationship between marital satisfaction and work-to-family conflict and work-to-family enrichment, respectively. After the mental health variable is added to the model, the effect of work-to-family conflict is no longer significant, whereas the coefficient size and significance of work-to-family enrichment are both reduced (b =.054, p < .01). Models 3 and 4 explain 20 percent of the variance in marital satisfaction, respectively. These results indicate that mental health fully mediates the effects of work-to-family conflict and partially mediates the effect of work-tofamily enrichment on marital satisfaction.

The results of the SEM bootstrap test (a bootstrap sample of 2,000 was specified) revealed that the indirect effects of work-to-family conflict and work-to-family enrichment on marital satisfaction through mental health were both significant (p < .001 and p < .01 for work-to-family conflict and work-to-family enrichment, respectively). Thus, hypothesis 5a is partially supported.

Models 5 and 6 test the mediating effect of physical health in explaining the relationship between marital satisfaction and work-to-family conflict and work-to-family enrichment, respectively. After the physical health variable is added to the model, the effect of work-to-family conflict is no longer significant, whereas the coefficient size and significance of work-to-family enrichment are both reduced (b = .054, p < .01). Models 5 and 6 explain 16 percent of the variance in marital satisfaction, respectively. This indicates that physical health fully mediates the effect of work-to-family conflict and partially mediates the effect of work-to-family enrichment on marital satisfaction. The results of the SEM bootstrap test (a bootstrap sample of 2,000 was specified) revealed that the indirect effects of work-to-family conflict and work-to-family enrichment on marital satisfaction through physical health were both significant (p < .001 and p < .01 for work-to-family conflict and work-to-family enrichment, respectively). Thus, hypothesis 6a is partially supported.

Table 4 shows the results of path analysis models predicting marital satisfaction. The results of model 1 suggest that those who experience more family-to-work conflict have lower marital satisfaction (b = -.262, p < .001), whereas those with more family-to-work enrichment have higher marital satisfaction (b = .176, p < .001). The  $R^2$  of

this model is 12 percent. After adding the control variables in model 2, the effects of family-work conflict and family-work enrichment are still significant (b = -.264, p < .001 and b = .177, p < .001, respectively). Therefore, hypotheses 2 and 4 are supported. Males report higher marital satisfaction (b = .080, p < .05).  $R^2$  increases to 18 percent.

Models 3 and 4 test the mediating effect of mental w?>health in explaining the relationship between marital satisfaction and family-to-work conflict and family-to-work enrichment, respectively. After the mental health variable is added to the model, both the effects of family-work conflict and family-work enrichment are still highly significant (b = -.156, p < .001 and b = .157, p < .001, respectively). These results show that mental health does not mediate the effects of family-to-work conflict and family-to-work enrichment on marital satisfaction. Models 3 and 4 explain 26 percent of the variance in marital satisfaction, respectively. The results of the SEM bootstrap test (a bootstrap sample of 2,000 was specified) revealed that the indirect effects of family-to-work conflict and family-to-work enrichment on marital satisfaction through mental health were both not significant. Thus, hypothesis 5b is not supported.

Models 5 and 6 test the mediating effect of physical health in explaining the relationship between marital satisfaction and family-to-work conflict and family-to-work enrichment, respectively. After the physical health variable is added to the model, both the effects of family-to-work conflict and family-to-work enrichment on marital satisfaction are still highly significant (b = -.158, p < .001 and b = .157, p < .001, respectively). Models 5 and 6 explain 27 percent of the variance in marital satisfaction, respectively. This demonstrates that physical health has a direct effect on marital satisfaction but does not mediate the effects of family-to-work conflict and family-towork enrichment on marital satisfaction. The results of the SEM bootstrap test (a bootstrap sample of 2,000 was specified) revealed that the indirect effects of family-to-work conflict and family-to-work enrichment on marital satisfaction through physical health were both not significant. Thus, hypothesis 6b is not supported.

## DISCUSSION

Using data from 1,961 married individuals, this study tested the effects of work-to-family conflict,

work-to-family enrichment, family-to-work conflict, and family-to-work enrichment on marital satisfaction. In addition, this study tested the mediating effects of mental and physical health. The results suggest that both negative and positive aspects of the work-family interface (i.e., conflict and enrichment in both directions) have direct and significant effects on marital satisfaction. Workto-family and family-to-work conflict were negatively associated with marital satisfaction. On the other hand, family-to-work and work-to-family enrichment were positively associated with marital satisfaction. In regard to the mediating effects, mental health and physical health both fully mediated the effect of work-to-family conflict, and mental health and physical health both partially mediated the effect of work-to-family enrichment on marital satisfaction. On the other hand, none of the health measures mediated the effects of family-to-work conflict and family-to-work enrichment on marital satisfaction.

This study contributes to work-family literature and work-family theory by being one of the few studies to test the bidirectional effects of both work-family conflict and work-family enrichment simultaneously on marital satisfaction. The results highlight the importance of testing both the negative and positive aspects of the work-family interface. They also suggest that family-to-work conflict and family-to-work enrichment experiences accounted for more variance in individuals' marital satisfaction than work-to-family conflict and work-to-family enrichment experiences did. This is consistent with some other research that suggests that the source of family-work conflict starts within the family and that the associated stress is reflected in difficulty completing work responsibilities. This argument was presented to explain why family-to-work conflict might be a stronger predictor of marital satisfaction than work-tofamily conflict (Minnotte et al. 2013). Using the same approach for the positive aspect of workfamily balance (i.e., enrichment), this could explain why family-to-work enrichment is a stronger predictor of marital satisfaction compared to work-to-family enrichment.

This study makes a theoretical contribution by highlighting the role of stress in the functioning of marital relationships. Overall, the results are consistent with some prior studies that show a positive relationship between work-family enrichment and marital satisfaction (Hill 2005; van Steenbergen et al. 2014) and a negative relationship between

work-family conflict and marital satisfaction (Amstad et al. 2011; Minnotte et al. 2013; Minnotte et al. 2015; Voydanoff 2005). Moreover, prior research provides evidence for possible mediators for the relationship between workfamily balance and marital satisfaction, such as positive and negative marital behaviors<sup>4</sup> (van Steenbergen et al. 2014), job exhaustion (Mauno and Kinnunen 1999), emotions of guilt and hostility (Judge, Ilies, and Scott 2006), and couple communication (Carroll et al. 2013). This study expands prior research by testing the mediating effects of mental and physical health.

Specifically, by applying the stress-divorce model to explain the impact of spillover stress, this study further helps us understand the relationship between work-family balance and marital satisfaction while testing the mediating effects of physical and mental health. Prior studies testing similar mediating effects have mostly focused on work-family conflict, except for one study (van Steenbergen et al. 2014). This current study, however, advances prior work by enriching our understanding of the underlying processes through which work-family conflict and work-family enrichment (in both directions) affect marital satisfaction by specifically testing the mediating effects of mental and physical health. Where different stress theories have been used to predict the negative effect of stress on marital outcomes, by the same token, the positive aspect of less stress on marital satisfaction should be further investigated. Moreover, if certain stressors are expected to affect marital well-being, then, as some prior studies pointed out, it is important to understand the interdependence of marital dyads by focusing on couples instead of individuals (Bodenmann 2000; Bodenmann et al. 2007). This approach would allow researchers to test crossover effects (Demerouti, Bakker, and Schaufeli 2005; Westman 2001; Young, Schieman, and Milkie 2014) and to better understand how and whether these effects vary by gender (Rohrbaugh et al. 2002; Saxbe, Repetti, and Nishina 2008).

There are also some limitations of this research. It is important to highlight them so directions for future research can be suggested. First, causality cannot be established due to the cross-sectional nature of the data; therefore, the causal order of the main associations cannot be disentangled. Some of these effects are likely bidirectional. For instance, it could be that work-family conflict influences marital satisfaction, which is

then associated with health outcomes (Matthews et al. 2006; Young et al. 2014).5 With more longitudinal data, not only could causal direction be tested, but scholars would be able to explore the effects of changes in both positive and negative aspects of work-family balance on marital satisfaction, by using repeated measures of the independent variables. This study, by testing the effect of work-family balance on respondents' actual marital satisfaction, focused on the negative and positive spillover effects. Due to data's being collected from the married individuals but not their partners or spouses, they failed to account for any crossover effects that work-family balance might have on marital satisfaction. Therefore, it is important for future research to collect data from couples so that couple-level measures can be used to test the impact of crossover effects and to understand the interdependence of marital dyads. With couple-level data, how information from one person affects his or her own and his or her spouse's reports of marital satisfaction (i.e., actor and partner effects) can be assessed. By doing this, future studies can test the crossover effects of work-family balance on marital outcomes. Moreover, the current results suggest that using work-related measures and health measures from individuals explains between 16 and 27 percent of the variance in marital satisfaction. Using couple-level measures would therefore be likely to increase the total variance explained.

In addition to using information from both spouses, life experiences other than experiences at work can be related to marital satisfaction. Prior research has supported the use of some other important variables in predicting marital satisfaction, some of which are individual personality characteristics, marital interaction, quality of spousal support, marital communication, marital aggression, gender ideology, and mental and physical health (see Bradbury, Fincham, and Beach 2000; Yucel and Koydemir 2015). Unfortunately, the survey data in this study are based on married individuals (not couples) and do not include these measures or spousal characteristics. The sample in this study might have a selectivity bias since it consists of married couples who stayed together; couples with the least marital satisfaction may have already dissolved their unions and thereby be eliminated from the sampling frame. Therefore, on average, the sample in the current study might have higher marital satisfaction than the general

population. In addition, the sample in this study is more advantaged in terms of education and income compared to those in the general population. This is not surprising, since the sample was limited to married respondents who are employed. However, it limits scholars' ability to generalize these findings to those populations of workers who are outside the sampling frame. For example, the results cannot be generalized to less-educated and low-income couples who are more likely to cohabit than get married (U.S. Census Bureau 2015). Nonetheless, the sample has enough variability in these measures to help alleviate some of these concerns for generalizability. Finally, some prior research suggests that the relationship between the main independent variables and marital satisfaction may be contingent upon other factors, such as gender (Figueroa, Aburto, and Acevedo 2012; Hill 2005; van Steenbergen et al. 2007; Wharton and Blair-Loy 2006) and couple type among married workers (sole breadwinner or dual earner) (Allard, Haas, and Hwang 2011; Ladge et al. 2014). Therefore, future work would also benefit from a closer analysis of how these relationships may vary across these factors.

Nevertheless, this study has provided some new insights into the topic of work-family balance. Prior findings were supported, but this study, by applying the stress-divorce model to explain the impact of spillover stress, provided evidence for a more nuanced model of the relationships between the negative and positive aspects of work-family balance and marital satisfaction. With the increase in the 24/7 economy, it is becoming harder to balance work and family responsibilities. Given the significant impact of work-to-family (family-to-work) conflict and work-to-family (family-to-work) enrichment on marital satisfaction, there are important implications of this study for policy makers and employers. The findings of this study suggest that familyfriendly workplaces and family-friendly societies are important goals to promote healthy communities, more satisfying marriages, and healthy individuals.

## **NOTES**

 van Steenbergen, Ellemers, and Mooijaart (2007:282) examined four types of enrichment: time-based, energy-based, behavioral, and psychological enrichment. Behavioral enrichment was defined as

- "occurring when behavior required or learned in one role makes it easier to fulfill the requirements of another role." In the same study, psychological enrichment was defined as the extent to which "participation in multiple roles can broaden an individual's frame of reference and provide the individual with new perspectives."
- The first five items were used to capture stress and coping, whereas the last two items were used to capture depression. Thus, this scale index captures all three dimensions of mental health.
- 3. The scale (which includes all seven items) was incorporated into the data as a standardized score, with higher scores indicating more mental health symptoms. Further information on this scale can be found in the 2008 National Study of the Changing Workforce public use files.
- 4. In the study by van Steenbergen, Kluwer, and Karney (2014), marital positivity (which is defined as interactions with one's spouse that are cheerful, optimistic, and uncritical) was used to measure positive marital behaviors. On the other hand, anger and withdrawal were used to measure negative marital behaviors.
- 5. These studies were based either on couples, where both spouses were asked questions about workfamily conflict, or on individuals who commented about their spouses' work-family conflict in addition to their own. These studies applied the stress process model to explain the impact of crossover stress. In this study, however, I applied the stress-divorce model by Bodenmann (1995, 2000) to explain the impact of spillover stress.

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