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# Work, Family, and Health: Work–Family Balance as a Protective Factor Against Stresses of Daily Life

*Joseph G. Grzywacz, Adam B. Butler, and David M. Almeida*

Work–family balance is increasingly viewed as a public health issue. Halpern's (2005) presidential address to the American Psychological Association, for example, contends that "work and family" is the critical issue of our time, and that difficulty balancing work and family is a major threat to the health and well-being of adults and children. Researchers have suggested that the quality of the interrelationship between work and family is a leverage point for adult health because it has the potential to affect health via multiple pathways (Grzywacz & Fuqua, 2000). A recent report by Corporate Voices for Working Families contends that flexibility in the workplace is a corporate imperative because, in part, it contributes to healthier employees by helping them successfully balance work and family responsibilities. These and other realities have contributed to calls by public and private organizations to focus on adults' ability to integrate work and family as a fundamental strategy for building the health of the population (Halpern, 2005; National Institute for Child Health and Human Development, 2004).

Research linking work–family balance, as an explicit construct, to health is less well established than policy debates and public forums suggest. There is little consistency in the meaning and measurement of work–family balance across studies because it remains conceptually under-developed (Greenhaus & Allen, 2006; Grzywacz & Carlson, 2007). Typically, work–family balance is equated with the absence of work–family conflict, but this practice is coming under scrutiny as accumulating evidence suggests

*The Changing Realities of Work and Family: A Multidisciplinary Approach*
Edited by Amy Marcus-Newhall, Diane F. Halpern, and Sherylle J. Tan
 ISBN: 978-1-405-16345-3

that balance is more than the absence of conflict (Frone, 2003; Grzywacz & Bass, 2003; Hammer, Cullen, Neal, Sinclair, & Shafiro, 2005; Kinnunen, Feldt, Geurts, & Pulkkinen, 2006). Further, research tends to focus on the health effects of specific indicators of work–family balance, without considering the potential that balance may exert its health effects by exacerbating (or attenuating) other life circumstances or situations. Finally, even if work–family balance is equivalent to the absence of work–family conflict, the vast majority of published studies have limited ability to make causal inferences because they are based on cross-sectional study designs.

The goal of this chapter is to broaden thinking about the meaning of work–family balance and how it may shape adult health. In this chapter, we posit that work–family balance can be viewed as an enduring circumstance characterizing the mutual interdependence between an individual's work and family lives (Werbel & Walter, 2002). Drawing on previous research examining contextualized models of health, we further posit that balance will have direct health effects and that it will benefit health by buffering individuals from the deleterious effects of daily hassles. We explore these ideas using data from the combined National Survey of Midlife Development in the United States and the National Study of Daily Experiences.

## Background

### *Defining Work–Family Balance*

Work–family balance has received scant research attention despite its popularity as a metaphor in the business world (Greenhaus & Allen, 2006; Grzywacz & Carlson, 2007). The vast majority of research invokes the balance concept without clearly defining it, or defines it explicitly or implicitly as the absence of work–family conflict (e.g., Hill, Hawkins, Ferris, & Weitzman, 2001). Likewise, practical attempts to promote "balance" focus primarily on reducing conflicts between work and family (Quick, Henley, & Quick, 2004). Although this definition places the balance concept within a rich nomological network of research, the mere absence of conflict inadequately captures positive aspects of the work–family interface that likely contribute to a balanced work–family arrangement. More specifically, recent theoretical and empirical work has recognized the importance of work–family enrichment or facilitation for completely understanding linkages between work and family (e.g., Aryee, Srinivas, & Tan, 2005; Frone, 2003; Greenhaus & Powell, 2006; Grzywacz & Butler, 2005; Grzywacz &

Marks, 2000; Voydanoff, 2004). (Note, the distinction between "enrichment," "positive spillover," and "facilitation" is not well articulated in the literature. Consistent with Greenhaus and Powell's (2006) recent theorizing, we assume these different labels are tapping a similar concept, one we refer to as "enrichment.")

An alternative conceptualization of balance follows from a literal interpretation of the metaphor, focusing on the equality of roles. In an influential paper, Marks and MacDermid (1996) used the term "evenhanded" to describe balance, emphasizing full engagement across life's roles. Kirchmeyer (2000) similarly emphasized the importance of distributing personal resources across life roles equitably to achieve balance. Others have emphasized that equal satisfaction with different roles epitomizes balance (e.g., Kofodimos, 1993). Although these definitions are true to the balance metaphor, it is dubious whether "equal" investment and satisfaction in work and family is possible or that it produces optimal outcomes (Grzywacz & Carlson, 2007). Indeed, Greenhaus, Collins, and Shaw (2003) found that self-reported quality of life was higher for individuals who devoted more resources to, and were more satisfied with, their family than work. Thus, equality in terms of resource investment or satisfaction in both work and family may not result in beneficial outcomes as implied by the balance metaphor.

A recent essay provides a foundation for an alternative conceptualization of work–family balance that shifts attention toward the interrelationship between the work and family domains. Drawing on examples from biological systems found in nature, Werbel and Walter (2002) suggest that work and family can be viewed as mutualistic, or interdependent, symbionts that are connected by a common element: an individual who routinely spends a portion of his/her daily life within each domain. The contention that work and family are mutualistic is based on the observation that most families need one or more members to be successfully engaged in the workforce in order for the family to carry out basic functions (Kanter, 1977); likewise, most organizations need and benefit from their employees' well-functioning families. For these authors, "work and family" is fundamentally an issue of energy exchange, such that excess energies (or resources) held by one domain are freely shared with domains lacking those energies. From this point of view, work–family balance can be conceptualized as the degree to which both work and family mutually benefit from the interrelationship created by the sharing of an individual member.

Viewing balance in terms of the degree of interdependence or mutual benefit between work and family is consistent with recent theorizing.

Frone (2003), for example, defined work–family balance as a situation where there was little interference between work and family (i.e., low levels of work-to-family and family-to-work conflict) and where the values and activities of each domain benefited the other (i.e., high work-to-family and family-to-work enrichment). Likewise, Barnett (1998) described a balance-like concept in terms of low conflict and high compatibility between work and family roles. Most recently, Voydanoff's (2005a) conceptualization of balance also highlights the exchange of valued resources between work and family to satisfy within-domain and cross-domain demands. Each of these ideas suggest that work–family balance is optimized when the benefits that work and family provide for each other exceed the difficulties that one may create for the other.

We assume that work–family balance, or the degree of mutual benefit between work and family, is a relatively stable attribute. This assumption is based on several strands of thought. First, the basic configuration of an individual's work and family life as well as corresponding responsibilities are not subject to substantial day-to-day or even month-to-month variation. Next, individuals purposefully organize their work and family lives in order to maintain some level of consistency across time (Moen & Wethington, 1992; Morehead, 2001). Clearly unexpected events such as a child's sickness or computer snafus arise, but it is unlikely that such events significantly alter the basic exchanges between work and family. Should events such as these become chronic, individuals will likely modify their strategies for combining work and family to recreate some level of stability or consistency in their daily lives (Kirkcaldy & Martin, 2000).

## Work–Family Balance and Health

There is a substantial body of research suggesting that work–family balance contributes to adult health (for a recent review, see Greenhaus, Allen, & Spector, 2006). Poor work–family balance, typically operationalized in terms of high work–family conflict, has been associated with several indicators of physical health including hypertension, comorbid physical conditions, as well as self-reported health and somatic complaints (Adams & Jex, 1999; Frone, Russell, & Cooper, 1997; Grandey & Cropanzano, 1999; Grzywacz, 2000; Kinnunen et al., 2006; Thomas & Ganster, 1995). Likewise, several studies note that poor work–family balance, again operationalized in terms of elevated work–family conflict, is associated with general distress, depressive symptomatology, as well as psychiatric disorders including

depression, anxiety disorder and behavior patterns indicative of alcoholism (Frone, 2000; Frone et al., 1997; Grzywacz & Bass, 2003; Hammer et al., 2005; Vinokur, Pierce, & Buck, 1999).

Unfortunately, research linking work–family balance, as an explicit concept, and health is limited. First, there is little prospective research examining the effects of work–family balance on adult health (cf. Frone et al., 1997; Hammer et al., 2005; Kinnunen, Geurts, & Mauno, 2004). The absence of prospective research makes it impossible to determine if poor work–family balance contributes to poorer health, or if poor health undermines adults' ability to balance work and family effectively. Next, previous research does not completely operationalize work–family balance because it focuses almost exclusively on work–family conflict (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005; Greenhaus et al., 2006) without giving attention to the benefits that work and family provide for each other. Cross-sectional evidence has linked work–family enrichment with subclinical and clinical indicators of mental health (Grzywacz, 2000; Grzywacz & Bass, 2003). One study has examined the prospective association of work–family conflict and work–family enrichment on depression (Hammer et al., 2005), but there has been no research examining physical health outcomes. Finally, previous research has relied on narrow conceptual arguments in positing linkages between work–family balance and health. The typical argument is that the absence of work–family balance is a poignant stressor because of the profound meaning ascribed to work- and family-related roles, and that the chronic stress of work–family imbalance undermines health via several pathways. Although compelling, it is becoming increasingly clear that stressors can act on health in complex and multifaceted ways (Taylor, Repetti, & Seeman, 1997) suggesting that a simple "direct effects" model may not adequately capture the health effects of work–family balance.

### *The Present Study*

In this study we posit that work–family balance can benefit physical and mental health in multiple ways. First, we posit that work–family balance will have a direct effect on adults' physical and mental health. This thinking is informed by substantial previous research reporting that indicators of balance like work–family conflict or work–family enrichment are associated with health outcomes. Our contribution to this literature is that we characterize individuals' work–family balance in terms of both work–family conflict and enrichment, and we examine prospective health effects. Second, we posit that work–family balance is a buffer of life stress.

That is, we suggest that a mutually beneficial interrelationship between work and family provides protection from the vicissitudes of daily life and will attenuate the negative health effects of exposure to stressors. The notion that chronic life conditions increase vulnerability to the health consequences of stress is consistent with other lines of research that are not focused on work–family balance per se. Evidence indicates, for example, that enduring socioeconomic hardship contributes to elevated vulnerability to life stressors (Aneshensel, 1992; Grzywacz, Almeida, Neupert, & Ettner, 2004; McLeod & Kessler, 1990). Results from other studies indicate that the health-related implications of daily stressors are elevated for individuals living with chronic hardships such as overcrowding or poor neighborhood quality (Caspi, Bolger, & Eckenrode, 1987; Lepore, Evans, & Palsane, 1991). Collectively, this evidence suggests that individuals in chronic hardship, such as being in a poorly balanced work and family arrangement, may have more intense responses to stressors.

Finally, there is reason to expect that relationships among work–family balance, stress, and health may differ for men and women. Evidence suggests, for example, that exposure and reaction to stressors differs between women and men (Almeida, Wethington, & Kessler, 2002; Turner, Wheaton, & Lloyd, 1995). There is also widespread belief that work and family role domains are strongly gendered (Eby et al., 2005; Larson, Richards, & Perry-Jenkins, 1994). Research focused on gender differences in the effects of alternative conceptualizations of balance has produced inconsistent results (Frone, 2003; Eby et al., 2005); nevertheless, there is evidence suggesting that work–family balance may influence women more strongly than men. Rothbard (2001), for example, found more resource depleting and enriching links between work and family for women than men. Findings such as these as well as summaries of the literature (Eby et al., 2005) suggest that the quality of interdependence between work and family may be more salient to women than men, suggesting that work–family balance will serve as a stronger buffer of life stress for women than men.

In summary, we argue that work–family balance can be conceptualized in terms of the degree of mutual benefit between work and family, and that the absence of work–family balance can affect health directly as well as by exacerbating the deleterious health effects of stressors. Based on our conceptualizations and previous research we hypothesized that:

> Hypothesis 1: Individuals for whom work and family are not balanced will have poorer physical and mental health than individuals with work–family balance.

Hypothesis 2: Individuals for whom work and family are not balanced will be more vulnerable to unexpected daily demands than individuals with work–family balance such that the effect of stressors on indicators of physical and mental health will be greater for those without work–family balance.

Hypothesis 3: The buffering effect of work–family balance on the stressor-health association will be stronger for women than men.

## Method

### *Sample*

Data for the analyses are from the National Study of Daily Experiences (NSDE). Respondents were 1,031 adults (562 women, 469 men), all of whom had previously participated in the National Survey of Midlife Development in the United States (MIDUS), a nationally representative telephone-mail survey of 3,032 people, aged 25–74 years, carried out in 1995–6 under the auspices of the John D. and Catherine T. MacArthur Foundation Network on Successful Midlife. Respondents in the NSDE were randomly selected from the MIDUS sample and received $20 for their participation in the project. Over the course of eight consecutive evenings, respondents completed short telephone interviews about their daily experiences. Data collection spanned an entire year (March 1996 to April 1997) and consisted of 40 separate "flights" of interviews with each flight representing the eight-day sequence of interviews from approximately 38 respondents. The initiation of interview flights was staggered across the day of the week to control for the possible confounding between day of study and day of week. Of the 1,242 MIDUS respondents contacted, 1,031 agreed to participate, yielding a response rate of 83 percent. Respondents completed an average of 7 of the 8 interviews, resulting in a total of 7,221 daily interviews.

The NSDE subsample and the MIDUS sample from which it was drawn had very similar distributions for age, marital status, and parenting status. The NSDE sample had a slightly greater percentage of women (54.5 percent versus 51.5 percent of the samples, respectively), was better educated (60.8 percent of the MIDUS sample had at least 13 years of education versus 62.3 percent of the NSDE subsample) and had a smaller percentage of minority respondents than the MIDUS sample. Of the NSDE sample, 90.3 percent were Caucasian, 5.9 percent African-American and 3.8 percent all other races, versus 87.8 percent Caucasian, 6.8 percent African-American,

and 4.4 percent all other races for the MIDUS sample. Respondents for the present analysis were on average 47 years old. Thirty-eight percent of the households reported having at least one child under 18 years old in the household. The average family income was between $50,000 and $55,000. Men were slightly older than women, had similar levels of education and were more likely to be married at the time of the study (77 percent of the women versus 85 percent of the men).

## *Measures*

### *Work–Family Balance*

Work–family balance was operationalized based on Frone's (2003) contention that work–family balance reflects low levels of work–family conflict and high levels of work–family enrichment. Construction of this variable proceeded in three steps. First, levels of work-to-family conflict, family-to-work conflict, work-to-family enrichment, and family-to-work enrichment were computed using published items (Grzywacz & Marks, 2000). Second, each variable was then dichotomized into high versus low using a median split. Finally, four mutually exclusive categories were created reflecting different characterizations of work–family balance, including: *balanced* (i.e., low work-to-family and family-to-work conflict and high work-to-family and family-to-work enrichment), *imbalanced* (i.e., high work-to-family and family-to-work conflict and low work-to-family and family-to-work enrichment), *blurred* (i.e., high work-to-family or family-to-work conflict and high work-to-family or family-to-work enrichment), and *segmented* (i.e., low work-to-family or family-to-work conflict and low work-to-family or family-to-work enrichment). Although the "balanced" and "imbalanced" labels correspond with Frone's conceptualization, we needed to create labels for other possible combinations. We reasoned that individuals with high levels of conflict and high levels of enrichment had very permeable work and family boundaries; consequently, we labeled this arrangement "blurred". By contrast, we reasoned that those with low conflict and low enrichment had relatively impermeable work and family boundaries so we labeled this arrangement "segmented."

### *Mental Health*

Mental health was operationalized using an inventory of ten emotions expanded from the psychological distress scale designed for the MIDUS survey (Mroczek & Kolarz, 1998) and queried during each telephone

interview. This scale was developed from the following well-known and valid instruments: The Affect Balance Scale (Bradburn, 1969), the University of Michigan's Composite International Diagnostic Interview (Kessler, McGonagle, Zhao, Nelson, Hughes, Eshleman et al., 1994), the Manifest Anxiety Scale (Taylor, 1953), and the Center for Epidemiological Studies Depression Scale (Radloff, 1977). Respondents were asked how much of the time today did they feel: worthless; hopeless; nervous; restless or fidgety; that everything was an effort; and so sad that nothing could cheer you up. Response categories for the index items were 1 = none of the time, 2 = a little of the time, 3 = some of the time, 4 = most of the time, and 5 = all of the time. Scores across the ten items were summed ($\alpha = .89$).

*Physical Health*

Physical health was operationalized using a shortened version of the physical symptom checklist (Larsen & Kasimatis, 1991). Items that overlapped with the psychological distress scale (e.g., "urge to cry") were omitted. Our 5-item scale assessed five constellations of symptoms: aches/pain (headaches, backaches, and muscle soreness), gastrointestinal symptoms (poor appetite, nausea/upset stomach, constipation/diarrhea), chest pain or dizziness (symptoms often associated with cardiovascular functioning), flu symptoms (upper respiratory symptoms; sore throat, runny nose; fever; chills) and a category for "other" physical symptoms or discomforts. Open-ended responses to the other physical symptoms question were subsequently coded and across the five items were summed ($\alpha = .71$).

*Daily Stressors*

Daily stressors were assessed through a semi-structured Daily Inventory of Stressful Experiences (DISE, Almeida et al., 2002). The DISE is a semi-structured instrument containing seven "stem" questions for identifying whether stressful events occurred in various life domains, as well as a series of questions for probing affirmative responses. For each daily interview, individuals who responded affirmatively to any of the stem questions received a value of one on an indicator variable of *any stress* and were coded zero otherwise.

## *Analyses*

The method used to examine the associations among work–family balance, stressor exposure, physical symptoms, and psychological distress within

individuals over time was based on a multilevel model, also commonly referred to as a hierarchical linear model (HLM, Bryk & Raudenbush, 1992). In this multilevel model, a lag-analysis was used, with prior day physical symptoms predicting current day physical symptoms, and prior psychological distress predicting the level of psychological distress reported on the current day. By controlling for prior-day values for physical symptoms and distress when predicting the current day values, the specification is equivalent to (but more flexible than) a change score model. Stressor exposure was defined as whether the respondent experienced any stressor. Respondents reporting no stressors were the comparison group.

The simple form of an HLM can be conceived of as two separate models, one a within-person model (Level 1) and the other a between-person model (Level 2). A distinctive feature of HLM is that the intercepts and slopes are allowed to vary across persons (Lee & Bryk, 1989), allowing estimates of between-person models of within-person variability. To examine the temporal links between daily psychological distress and stressors, we fit a within-person model essentially equivalent to 1,031 regressions assessing daily covariation of stressors and distress. The unit of observation for each of these regressions is the person-day, so the sample size for each of these regressions is N = 8. Using a simple example in which health depends on a single explanatory variable – stressors – the model can be expressed as:

$$\text{Level 1:} \quad \text{HEALTH}_{it} = a_{0i} + a_{1i}\text{STRESSOR} + e_{it}, \tag{10.1}$$

where $\text{HEALTH}_{it}$ is the reported health outcome (i.e., physical symptoms or psychological distress) of $\text{Person}_i$ on $\text{Day}_t$, STRESSOR indicates whether $\text{Person}_i$ experienced a stressor on $\text{Day}_t$, $a_{01}$ is the intercept indicating $\text{Person}_i$'s average level of health when no stressor was reported, $a_{1i}$ is the slope indicating the association between stressor exposure and health for $\text{Person}_i$, and $e_{it}$ is the random component or error associated with distress of $\text{Person}_i$ on $\text{Day}_t$. To estimate average effects for the entire sample, the intercepts and slopes of the Level 1 within-person model become the outcomes for the Level 2 between-person equations as follows.

$$\text{Level 2:} \quad a_{0i} = B_0 + d_i, \tag{10.2}$$

$$a_{1i} = B_1 + g_i \tag{10.3}$$

The sample size for each of the Level 2 regressions is N = 1,031. Equation 10.2 shows that $Person_i$'s average health score across the diary days ($a_{0i}$) is a function of the intercept for the entire sample ($B_0$) – the grand mean of the sample – and a random component or error ($d_i$). Likewise, equation 10.3 shows that $Person_i$'s slope between distress and health ($a_{1i}$) is a function of the grand mean of the entire sample ($B_1$), and a random component or error ($g_i$). As discussed earlier in this paragraph, this basic model was extended to include prior day physical symptoms or negative affect as covariates for their respective outcomes to attenuate the possibility of reverse causality, whereby previous days poor health (physical or mental) contributed to both experiencing a stressor and health problems on any given day.

HLM provides the flexibility to allow the intercepts and slopes to vary across persons by stable individual characteristics (e.g., BALANCE). For example, to examine differences in the daily covariation of distress and stressor exposure by levels of work–family balance, one can formulate the following model

$$\text{Level 1:} \quad \text{DISTRESS}_{it} = a_{0i} + a_{1i}\text{STRESSOR} + e_{it} \tag{10.4}$$

$$\text{Level 2:} \quad a_{0i} = B_0 + B_1(\text{BALANCE}) + d_i, \tag{10.5}$$

$$a_{1i} = B_2 + B_3(\text{BALANCE}) + g_i \tag{10.6}$$

Equations 10.5 and 10.6 model BALANCE differences in Level 1 intercepts and slopes. Of particular note is equation 10.6 because it considers the differential vulnerability hypothesis by testing whether the stressor-distress slopes ($a_{1i}$) vary according to degree of work–family balance.

In these analyses, a model where the slope is constrained to be equal across subjects (for example, a model where the strength of the association between distress and stressor exposure is the same across all participants) is compared to one where the slopes are allowed to vary across individuals (in this example, a model where the association is not the same across individuals with differing socioeconomic status). The models are compared by taking the difference between the obtained model fits [i.e., –2 ln(Likelihood)] and testing its significance with the degrees of freedom equal to the difference in the number of parameters of the two models (df = 2, in this example) (Bryk & Raudenbush, 1992). If the models are not significantly different, the model constraining the slopes to be equal is chosen for reasons of parsimony.

## Results

Work–family balance is a relatively uncommon situation in this national sample. Approximately 9 percent of working adults met the critieria for "balanced" indicated by high levels of work–family enrichment and low levels of work–family conflict (Table 10.1). A slightly greater proportion of working adults were classified as having an "imbalanced" work–family arrangement (11 percent) or one characterized by higher levels of conflict than enrichment. The most common work–family arrangement in this sample of working adults was "blurred" or an arrangement characterized by high levels of work–family enrichment and high levels of work–family conflict; however, nearly as common was a "segmented" arrangement characterized by low work–family conflict and low work–family enrichment.

Bivariate and multivariate analyses provide support for the hypothesis that the absence of work–family balance will undermine health. Bivariate correlations suggest that "imbalance" is associated with greater physical symptoms and psychological distress (Table 10.1); however, there are few robust correlations among the other work–family arrangements and the health outcomes. Turning to the multivariate analyses, our models present strong evidence that work–family balance is a protective factor for physical health (see Model 1, Table 10.2). The average number of reported physical symptoms was higher for individuals with an "imbalanced" and "blurred" (trend level) work–family arrangement in contrast to those with a balanced arrangement, controlling for previous day symptoms. For individuals with an "imbalanced" work and family arrangement, the average physical symptom score was .73 units higher; an increase of nearly one-half of a standard deviation. Consistent with the second hypothesis positing that work–family balance acts as a buffer of life stress, Model 2 of Table 10.2 indicates that the effect of stressor exposure on physical symptoms is greater among individuals who have a "segmented" and those who have an "imbalanced" work–family arrangement relative to those with a balanced work–family arrangement. Consistent with our hypothesis that work–family balance is more important to women's than men's health, trend level evidence suggests that being in an imbalanced work–family arrangement exacerbates the effect of stress exposure on physical health for women, but this trend-level effect is attenuated for men (Model 3, Table 10.2).

Turning to the mental health outcome, results of hierarchical linear models provided partial support for our first hypothesis (Model 1, Table 10.3). As hypothesized, individuals in an imbalanced work and family

*Table 10.1* Means, standard deviations, and inter-correlation among primary independent variables.

| | *M* | *SD* | *1* | *2* | *3* | *4* | *5* | *6* | *7* |
|---|---|---|---|---|---|---|---|---|---|
| Work–family balance | | | | | | | | | |
| 1. Balanced | 0.09 | 0.28 | | −0.09* | −0.25*** | −0.26*** | −0.10* | −0.09 | −0.16** |
| 2. Imbalanced | 0.11 | 0.31 | −0.12* | | −0.26*** | −0.27*** | −0.08 | 0.08 | 0.21*** |
| 3. Segmented | 0.39 | 0.49 | −0.25*** | −0.30*** | | −0.68*** | −0.14** | −0.09 | −0.07 |
| 4. Blurred | 0.41 | 0.49 | −0.25*** | −0.30*** | −0.64*** | | 0.14** | 0.09 | 0.05 |
| 5. Stress exposure† | 2.81 | 1.88 | −0.13* | 0.16** | −0.18*** | 0.13** | | 0.24*** | 0.24*** |
| 6. Psychological distress‡ | 1.78 | 2.85 | −0.09 | 0.19*** | −0.09 | 0.01 | 0.26*** | | 0.44*** |
| 7. Physical symptoms‡ | 1.56 | 1.56 | −0.03 | 0.17*** | −0.07 | −0.02 | 0.21*** | 0.61*** | |

*Notes*: * $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed); † Stress exposure reflects the average number of days participants reported a stressor;
‡ Psychological distress and physical symptoms reflect the grand mean for all participants across all interview days;
Correlations above the diagonal are for women, below are for men.

*Table 10.2* Results of hierarchical linear models estimating change in physical symptoms.

| | *Model 1 Main effects* | *Model 2 Vulnerability* | *Model 3 Gendered vulnerability* |
|---|---|---|---|
| Gender (women = 1) | −0.22** | −0.22** | 0.13 |
| *Work–family balance* | | | |
| Segmented | 0.19 | 0.09 | 0.22 |
| Imbalanced | 0.73*** | 0.49** | 0.82** |
| Blurred | 0.22† | 0.19 | 0.34† |
| Balanced | *Reference* | *Reference* | *Reference* |
| Stress exposure | 0.35*** | 0.03 | −0.01 |
| *Interaction terms* | | | |
| Segmented*Stress | | 0.42* | 0.57* |
| Imbalanced*Stress | | 0.67** | 0.60† |
| Blurred*Stress | | 0.21 | 0.34 |
| Men*Stress | | | 0.11 |
| Men*Segmented | | | −0.28 |
| Men*Imbalanced | | | −0.62† |
| Men*Blurred | | | −0.29 |
| Men*Segmented*Stress | | | −0.37 |
| Men*Imbalanced*Stress | | | 0.09 |
| Men*Blurred*Stress | | | −0.34 |

*Notes*: † $p < .10$; * $p < .05$; ** $p < .01$ ***; $p < .001$ (two-tailed); All models control for the effects of age, education, income, race/ethnicity, and previous day physical symptoms.

arrangement reported higher levels of psychological distress, controlling for previous day distress. Mean differences in psychological distress for those with a balanced versus imbalanced work–family arrangement were sizeable; approximately one-third of a standard deviation. Evidence in model 2 suggests that living in an imbalanced work and family arrangement exacerbates the effect of stress exposure on mental health. However, once gender interactions are introduced into the model, it becomes clear that gender shapes the buffering potential of work–family balance (see Model 3, Table 10.3). The effect of stress on psychological distress is large and significant for women ($b = 1.14$, $p < .05$), but there is no evidence that the absence of work–family balance exacerbates the mental health effects of stress exposure among women. By contrast, for men, the effect of stressor

*Table 10.3* Results of hierarchical linear models estimating change in psychological distress.

| | *Model 1 Main effects* | *Model 2 Vulnerability* | *Model 3 Gendered vulnerability* |
|---|---|---|---|
| Gender (women = 1) | −0.05 | −0.06 | 0.08 |
| *Work–family balance* | | | |
| Segmented | 0.21 | 0.21 | 0.26 |
| Imbalanced | 0.85*** | 1.02** | 1.03† |
| Blurred | 0.26 | 0.46 | 0.48 |
| Balanced | *Reference* | *Reference* | *Reference* |
| Stress exposure | 0.90*** | 0.59* | 1.14** |
| *Interaction terms* | | | |
| Segmented*Stress | | 0.41 | −0.02 |
| Imbalanced*Stress | | 0.89** | −0.35 |
| Blurred*Stress | | 0.20 | −0.15 |
| Men*Stress | | | −1.30* |
| Men*Segmented | | | −0.10 |
| Men*Imbalanced | | | −0.10 |
| Men*Blurred | | | −0.04 |
| Men*Segmented*Stress | | | 1.03† |
| Men*Imbalanced*Stress | | | 2.65*** |
| Men*Blurred*Stress | | | 0.82 |

*Notes*: † $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed); All models control for the effects of age, education, income, race/ethnicity, and previous day psychological distress.

exposure on psychological distress among those in a balanced work and family arrangement is lower for men than for women ($b = -1.30$, $p < .05$). However, for men in an imbalanced work and family arrangement, the effect of stressor exposure on psychological distress is substantial ($b = 2.65$, $p < .001$).

## Discussion

The primary goal of this study was to examine the association between work–family balance and health using a prospective study design. Although leading a balanced work and family life is implicitly believed to contribute

to health and overall well-being, this assumption has not previously been subjected to scientific scrutiny. Much of the extant research on associations between work–family interactions and health have been limited to examinations of work–family conflict rather than balance *per se*. Using a definition of balance that included enriching as well as conflicting work–family experiences, we found that individuals in an imbalanced work and family arrangement report poorer daily physical and mental health. Moreover, an imbalanced work and family arrangement accentuates the negative impact of daily stressors on physical and mental health. These findings clearly show that there are negative health consequences associated with an imbalanced work and family life and imply there is a substantial public health benefit to promoting work–family balance in the population (Grzywacz & Fuqua, 2000; Halpern, 2005).

Before discussing the health implications of work–family balance, it is important to again clarify what we believe a balanced work–family life is. Few researchers have tried to measure balance as a construct that is distinct from work–family conflict, often defining balance as low levels of interrole conflict. We believe that the distinction between work–family conflict and work–family balance is important and more than semantic. Although reducing conflict between life roles is likely to benefit one's health (Greenhaus et al., 2006), we believe the concept of balance implies something more than the absence of conflict; more specifically, we define balance as both having a high level of positive interactions between work and family as well as a low level of conflict between the roles. This conceptualization suggests that programmatic attempts to promote balance require a dual approach of reducing conflicts and promoting enrichment. Consequently, in addition to initiatives like workplace flexibility and on-site child care to reduce conflict between work and family, it is important to develop policies and programs focused on building synergies between individuals' work and family lives. Unfortunately, research upon which to build recommendations is lacking, but some evidence suggests that building greater worker autonomy and helping workers advance and make a difference in their organization may contribute to enrichment (Butler, Grzywacz, Bass, & Linney, 2005; Grzywacz & Butler, 2005; Voydanoff, 2005b).

The results of this study provide compelling evidence suggesting that the quality of the interrelationship between work and family affects adult health. Across both outcomes reflecting physical and mental health, we found greater decrements to health during the study period for individuals in an imbalanced (i.e., low enrichment, high conflict) versus a balanced (i.e.,

high enrichment, low conflict) work–family arrangement. These results are consistent with several cross-sectional studies showing that elevated work–family conflict is associated with poorer health (Frone, 2000; Grandey & Cropanzano, 1999; Grzywacz, 2000; Thomas & Ganster, 1995), and they add to the limited number of prospective studies documenting the health effects of experiences reflecting the interrelationship between work and family (Frone et al., 1997; Hammer et al., 2005; Kinnunen et al., 2004). Further, these results dovetail nicely with those from cross-sectional studies showing that work–family enrichment buffers the relationship between work–family conflict and mental health (Grzywacz & Bass, 2003) and prospective evidence indicating the salience of work–family enrichment on mental health (Hammer et al., 2005).

New to the work–family literature is our finding that a mutually beneficial interrelationship between work and family buffers the effects of life stress. Specifically, we found that when individuals were exposed to stressors, the decrement to health was greater for individuals whose work and family lives were imbalanced than for those who were balanced. Recognizing that the items used to operationalize balance were measured one year prior to the assessment of health symptoms, our results provide strong evidence suggesting that a work and family life characterized by a mutually beneficial interrelationship may enhance individual health by creating a context that helps individuals more effectively adapt to unexpected daily demands. Research is needed to replicate and clarify these findings; nonetheless, they are exciting because they suggest that work–family balance can affect health through multiple channels, thereby making it a salient leverage point for improving the health of the population (Grzywacz & Fuqua, 2000; Halpern, 2005).

Although the division of work and family labor is intricately tied to gender (Eby et al., 2005; Larson et al., 1994), the extant literature provides inconsistent evidence of gender differences in the experience of work–family conflict and enrichment (Byron, 2005; Frone, 2003). Yet, gender may still moderate relationships between work–family experiences and life outcomes. We asked whether work–family imbalance differentially increased vulnerability to daily stressors for women and men. We did not find that imbalance increased women's vulnerability to physical complaints, and contrary to expectation, we found that the effect of stressor exposure on psychological distress was elevated among men with an imbalanced work and family arrangement. This finding is difficult to interpret, but it suggests that imbalance may play a more significant role in men's mental health

than women's, perhaps because men are less likely to use available resources (e.g., organizational policies) to improve their work–family arrangement (Pleck, 1993). Although research should continue to explore potential gender differences in the ability of work–family balance to benefit health, we do not want to over-interpret our isolated finding.

Our study has several implications for the conceptualization of work–family balance. First, it is clear that health-related consequences of work–family experiences may be shaped by the interaction between conflict and enrichment. This reinforces the importance of considering enrichment, or the positive side of the balance equation, when examining work–family relationships, and to fully understand the rich interplay between these two primary domains of adult life. Second, it is important for future research to examine the relative stability of work–family balance in daily life. Our work–family balance measures were collected as part of a cross-sectional study, so we examined overall impressions of balance, finding that they were prospectively related to daily health. This implies that relatively stable levels of balance do exist that may affect important life outcomes like health. Yet, prior studies have found significant daily variation in both work–family conflict and enrichment (Butler et al., 2005). It would be valuable to determine if balance is, in fact, a relatively enduring phenomenon or if it is more dynamic in nature. Anticipating that work–family balance does have some enduring features, it will be vital for future research to clearly identify modifiable factors that enable mutually beneficial interrelationships between adults' work and family lives.

In summary, our results indicate that individuals whose work and family lives are mutually beneficial have better physical and mental health. Some of these health effects were direct; however, some of the health advantage resulted from the protection a balanced work and family arrangement provided individuals from the negative effects of daily stress. Although more research is needed to fully understand what work–family balance is and how it ultimately affects individual health, the results of this study support claims that promoting work–family balance in the adult population is a viable strategy for improving population health.

## Acknowledgment

The research was partially supported by a grant from the Alfred P. Sloan Foundation (2006-5-22WPF).

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