Community, Work & Family, 2016
Vol. 19, No. 4, 462–480, http://dx.doi.org/10.1080/13668803.2015.1074545

Routledge
Taylor & Francis Group

Double trouble: work–family conflict and well-being for second job holders

Elizabeth M. Boyd[a]*, Michael T. Sliter[b] and Sarah Chatfield[c]

[a]*Department of Management and Entrepreneurship, Kennesaw State University, Kennesaw, GA, USA;* [b]*Department of Psychology, Indiana University-Purdue University-Indianapolis, Indianapolis, IN, USA;* [c]*Aon Hewitt, New York, NY, USA*

(*Received 4 December 2013; accepted 10 June 2015*)

The purpose of this study was to provide an initial investigation into the work–family conflict (WFC) experiences of individuals who hold a second job. Specifically, we proposed two opposing theoretical arguments regarding the relationship between WFC and four measures of well-being: life satisfaction, physical health, emotional exhaustion, and exercise for individuals who hold two jobs. In a sample of individuals working two jobs, we tested whether the effects of WFC arising from the first job and from the second job exerted an additive or interactive effect on employee well-being. Our results indicated that for emotional exhaustion, physical symptoms, and life satisfaction, the effects of WFC from two jobs are interactive; but that for exercise, the effects of WFC from two jobs are additive. In both cases, the additional WFC experienced as a result of working a second job contributed to the prediction of employee well-being over and above WFC from the first job. Results are discussed within the context of relevant theory, and suggestions are made for future research.

Keywords: work–family conflict; moonlighting; second job holders; conservation of resources; role theory

El propósito de este estudio fue proveer una investigación inicial sobre las experiencias del conflicto familia-trabajo de personas que tienen un segundo trabajo. Específicamente, propusimos dos argumentos teoréticos opuestos con respeto a la relación entre el conflicto familia-trabajo y cuatro medidas de bienestar: la satisfacción con la vida, la salud física, el agotamiento emocional, y el ejercicio por las personas quien tienen dos trabajos. En una muestra de personas con dos trabajos, probamos si los efectos del conflicto familia-trabajo que originaron del primer trabajo y del segundo trabajo tenían un efecto aditivo o interactivo sobre el bienestar de los empleados. Los resultados indicaron que en cuanto al agotamiento emocional, las síntomas físicas, y la satisfacción con la vida, los efectos del conflicto familia-trabajo de los dos trabajos son interactivos, pero en cuanto al ejercicio, los efectos del conflicto familia-trabajo son aditivos. En ambos casos, la experiencia adicional del conflicto familia-trabajo a consecuencia de trabajar en dos empleos contribuyó a la predicción del bienestar del empleado por encima y más allá del conflicto familia-trabajo del trabajo primero. Se discuten los resultados en el contexto de la teoría relevante, y se sugieren direcciones de investigaciones futuros.

*Corresponding author. Emails: eboyd17@kennesaw.edu, drlizboyd@gmail.com

Palabras claves: conflicto familia-trabajo; pluriempleo; conservación de los recursos; la teoría del rol

Research on work–family conflict (WFC) has historically defined the roles of work and family rather narrowly, which has limited the generalizability and applicability of the field (Kossek, Baltes, & Matthews, 2011). For example, most WFC research fails to define the roles of work and family, while at the same time implicitly assuming that work refers to an individual's only job and that family refers to an individual's nuclear family. Researchers have made strides toward broadening and fleshing out the 'family' side of the WFC equation (e.g. Moen, 2011). However, remarkably little attention has been focused on second job holders, even though a relatively large portion of the US workforce actually holds more than one job (e.g. Arcuri, 1987). Because the WFC experienced by these individuals may manifest itself differently from that of individuals holding only one job, it is essential to better understand how WFC operates within second jobholders (Sliter & Boyd, 2014). As a result, the purpose of this study is to explore the experience of WFC in individuals holding a second job. More specifically, we aim to explore how the additional WFC experienced as a result of holding a second job combines with WFC from the first job to predict employee well-being.

Our results should contribute to the literature on WFC by answering explicit calls to better understand the experience of second jobholders (Sliter & Boyd, 2014). In addition, this study provides an initial foray into exploring how WFC from multiple jobs may actually compound to influence outcomes. To achieve these goals, we will first briefly review past literature establishing the importance and consequences of WFC. We will then review the small amount of past literature on second jobholders. Next, we will present theoretical arguments relating to the nature (additive vs interactive) of the additional demands presented by second jobs on well-being. Finally, we will present a study testing our hypotheses in a sample of working adults.

Work–family conflict

WFC is an occupational stressor that is becoming increasingly important due to factors such as an increase in dual-earner families, a decrease in the boundaries between work and family roles, and an increased interest in employees' health and well-being (Bianchi & Milkie, 2010; Ford, Heinen, & Langkamer, 2007; Guest, 2002). WFC describes the phenomenon whereby an individual who takes part in multiple life roles (e.g. work, family) may experience difficulty fulfilling the demands of one role as a result of demands from another (Greenhaus & Beutell, 1985). Although a great deal of research has been performed and many organizational interventions have been created to try to reduce WFC, it is still a significant problem in today's organizations (Kelly et al., 2008).

WFC is generally conceptualized as occurring in two directions: work interference with family (when the demands of work interfere with effective functioning in the family role) and family interference with work (when the demands of family interfere with effective functioning in the work role; Frone, Russell, & Cooper, 1992). However, recent research is beginning to establish that cross-domain relationships can occur as

well (e.g. Amstad, Meier, Fasel, Elfering, & Semmer, 2011). Historically, three forms of WFC were also proposed. First, time-based conflict occurs when time demands from different roles are in conflict (e.g. occurring at the same time) or when there is not enough time to meet all role demands. Strain-based conflict occurs when a strain experienced due to stress in one role negatively impacts performance in another role. Finally, behavior-based conflict occurs when behaviors that are necessary in one role are counterproductive in another role. However, most research now focuses on just time- and strain-based conflict (Dierdorff & Ellington, 2008).

Research on predictors of WFC has largely found that increased demands from the work and family roles result in higher WFC (e.g. Byron, 2005). For example, within the work role, factors such as time demands, workload, and level of involvement are associated with more WFC (Batt & Valcour, 2003; Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005). Similarly, characteristics of the family role that represent increased demands (e.g. time demands, involvement, presence of children at home, and supportiveness of spouse) are associated with increased conflict (Eby et al., 2005).

In terms of outcomes, WFC has been shown to relate to important outcomes in the work and family domains such as psychological distress, job dissatisfaction, lowered organizational commitment, turnover, and lowered life satisfaction (Allen, Herst, Bruck, & Sutton, 2000; Carlson, Kacmar, & Williams, 2000). In addition, WFC has the potential to be very costly to organizations as a result of costs associated with reductions in workers' health and productivity, as well as lawsuits arising from strains related to WFC (Thomas & Ganster, 1995). In addition, WFC can be a significant drain on individual resources and can relate to negative personal outcomes such as burnout, disengagement, and poor health (Allen et al., 2000). It is important to assess such outcomes not only because of their costs to organizations in terms of healthcare and absenteeism, but also because they are often key indicators of the health and well-being of individuals.

Overall, WFC has been shown to be a pervasive and important phenomenon. As was noted above, however, research on WFC has been focused rather narrowly, and has largely made the implicit assumption that individuals hold only one job. As a result, the experiences of individuals who hold multiple jobs have gone unexplored. To the extent that the experiences of these individuals are important, and to the extent that investigations of these individuals can shed light on the phenomenon of WFC itself, it should be valuable to expand WFC research to include them.

Second job holding

In the past, terms such as 'moonlighter' have been used to denote the situation where an individual holds more than one job. However, the term is somewhat out-of-date and potentially misleading in that it implies that the first (full-time) job is performed during the day and the second (part-time) job is performed at night. In reality, many individuals balance a second job on different days or during different daytime hours from the first job. Moreover, many individuals actually hold two full-time jobs. Thus, we will use the term *second jobholding* (SJ) to refer to the situation where an individual holds a primary, full-time job and also works a secondary, full- or part-time job during different hours.

Second jobholders have not received a great deal of attention from organizational researchers in the past (Sliter & Boyd, 2014), perhaps due to the fact that the

prevalence of SJ is not well understood. That is, official figures regarding the prevalence of SJ tend to represent dramatic underestimates. For example, the Bureau of Labor Statistics estimates that 5% of the US workforce (about seven million people) hold second jobs (Bureau of Labor Statistics U.S. Department of Labor [BLS], 2013). The rate is similar in the United Kingdom, at 4.1% (1.2 million people; Dickey, Watson, & Zangelidis, 2011), though it is difficult to obtain these statistics in other nations to obtain a worldwide prevalence rate. Past research has found that the rate of SJ may be much higher than these estimates, however. For example, studies of SJ among police, teachers, and firefighters have found rates between 28 and 72% (e.g. Arcuri, 1987; National Education Association of the United States Research Division [NEA], 1996; Parham & Gordon, 2011). Although these estimates vary widely, it is clear that official estimates of SJ are strikingly low, particularly within certain occupations.

Although past research on SJ has been quite limited, there seems to be some evidence regarding the motivation for SJ and the consequences of SJ. Perhaps not surprisingly, most studies agree that financial needs are the major motivation for SJ (Dempster-McClain & Moen, 1989; Miller & Sniderman, 1974). That is, individuals holding second jobs most often do so to pay off debts, to meet normal expenses, or to save money for the future. figures from the US Current Population Survey coincide with these findings, showing that just over 63% of second jobholders do so for financial reasons. However, there is some evidence that people work a second job for intrinsic reasons (Jamal, Baba, & Riviere, 1998), which further highlights the need to understand the nature and impact of SJ.

With respect to the consequences of SJ, the focus has mainly been on whether SJ is positively or negatively related to well-being and job-focused attitudes. However, these results have been quite mixed, perhaps as a result of the highly varying methodologies and outcomes assessed. For example, a small qualitative study of SJ teachers found that 67% felt SJ was negatively impacting their job performance at their first job (Parham & Gordon, 2011). However, another qualitative study reported more mixed results. In a qualitative study of SJ police officers, 35% felt their second job was affecting their family situation in a negative way, whereas 18% said the opposite and 46% said it had no effect at all (Arcuri, 1987). Interestingly, quantitative studies of SJ have tended to show either that holding a second job does not affect well-being and attitudes or that second jobholders are actually better off. For example, two quantitative studies found that teachers with second jobs were the same as non-SJ teachers with respect to job satisfaction, stress, and attitudes toward students and parents (Pearson, Carroll, & Hall, 1994; Santangelo & Lester, 1985). Studies performed by Jamal and colleagues (Jamal et al., 1998) have found that second jobholders are actually better off than non-second jobholders with respect to physical and mental health, job satisfaction, stress, and job performance.

Overall, the very limited number of studies on SJ and the unsystematic and atheoretical nature of the literature make it difficult to draw any strong conclusions about the effects of holding a second job. It seems there is not a clear picture of whether employees who engage in SJ are negatively impacted, either in their work performance or in their well-being, nor is there much evidence regarding how SJ might impact other areas of a person's life. To help shed light on the consequences of SJ, we will apply theories from WFC in an attempt to better understand how the demands arising from an individual's jobs impact his or her nonwork life.

WFC and second jobs

Because WFC is a concept so closely tied to the holding of multiple life roles, it should provide an excellent lens through which to view the potential impact of SJ. As was noted above, because it represents a type of workplace stressor, increases in WFC are associated with decreases in well-being. Within the stress literature, it is very well established that increases in stress are associated with decreases in the overall well-being of employees. For example, in a recent meta-analysis of 79 studies investigating the link between workplace stress and physical health Nixon, Mazzola, Bauer, Krueger, and Spector (2011) found that all eight workplace stressors under investigation (e.g. work hours, role conflict, lack of control, workload) were significantly related to poorer physical health as indicated by a number of different measures.

Similarly, research on WFC has established that WFC is associated with adverse consequences relating to employees' physical and mental health. For example, WFC has been shown to relate to increased levels of alcoholism, higher levels of depression, poorer physical health, and increased levels of hypertension (Frone, Russell, & Cooper, 1992, 1997; Frone, Russell, & Barnes, 1996). WFC also relates to decreases in overall life satisfaction (Bedeian, Burke, & Moffett, 1988; Kossek & Ozeki, 1998). For these reasons, we expect that increased WFC will relate to decreases in overall well-being.

However, it is unclear based on the literature in WFC just how these decreases will occur in a multiple-job situation. As was noted above, the general prediction within the literature is that increased demands from the work role result in increased WFC. However, just how the increases from multiple jobs will enact their effects on outcomes is unclear. In an attempt to understand these effects, we will rely on two commonly used theoretical frameworks within the WFC literature: conservation of resources (COR) theory and role theory. Although these frameworks make similar predictions regarding WFC from a single work role, in an SJ situation they actually create two alternative competing hypotheses. Because so little previous research exists on how first and second jobs relate to each other, in the following sections we will propose, and then test, two alternatives as equally plausible.

Conservation of resources theory

Many past researchers have utilized COR theory to help explain the WFC process (e.g. Grandey & Cropanzano, 1999). COR theory states that individuals are motivated to obtain, retain, protect, and foster the things that they value (Hobfoll, 2001). These valued entities (resources) can take the form of objects (e.g. home), conditions (e.g. marriage), personal characteristics (e.g. sense of optimism), and energy (e.g. knowledge). Within COR, strain occurs under one of three conditions: (1) when resources are threatened, (2) when resources are lost, and (3) when there is insufficient return after resource investment. When there is role conflict, resources (such as having adequate time for both roles) are threatened and lost, and investing heavily in one role may not yield resource return. As such, WFC is caused when resource drain is too great and resource gain is too little. Many past researchers have found support for the COR model in that demands from the work and family roles are consistently found to be related to increases in experienced WFC (e.g. Eby et al., 2005). Further, WFC itself represents a drain on resources and as such is associated with greater strain (e.g. Allen et al., 2000).

Within the COR framework, holding a second job is best construed as an additional source of demand, as holding a second job necessarily takes more of an individual's time and psychological resources to perform. The key component to consider when applying COR to the situation of SJ is that COR theory *does not differentiate between demands from different sources.* As such, the source of the demands (e.g. the actual number of jobs an individual holds) is unimportant. Rather, the number of hours and amount of resources spent in total is the important precursor to WFC within COR. Thus, an individual who works 60 hours per week at two jobs might be expected to experience the same amount of WFC as an individual who works 60 hours per week at one job and expends the same amount of psychological resources. Similarly, the WFC experienced from Jobs 1 and 2 would not be differentiated in COR.

For example, many past researchers have conceptualized resources within COR as being similar to pieces of a pie (e.g. Bainbridge, Cregan, & Kulik, 2006). Thus, as one piece of pie (amount of resources) is removed, there is simply less pie (fewer resources) to allocate to other demands. Although the removal of one piece of pie means that there are fewer resources left, its removal does not affect the removal of other pieces of pie (it would not magnify the effects of a piece of pie already removed). In line with this explanation, a great deal of past research based in COR that has investigated stress outcomes such as well-being in individuals holding multiple roles has considered those roles as additive, rather than interactive, predictors (e.g. Bainbridge et al., 2006). For example, in perhaps the seminal work utilizing COR theory to understand WFC, the authors consider the work and family roles as additive, rather than interactive, predictors of outcomes (Grandey & Cropanzano, 1999). As such, we argue that WFC originating from Job 2 would represent an additional, rather than a compounding, influence on well-being. That is, we propose that within COR theory, the effects of WFC from Jobs 1 and 2 will have an additive effect on well-being, where the effects simply add on or stack on top of each other rather than combining interactively.

Role theory

Role theory framework provides an alternative perspective to COR. The initial conceptualization of role theory (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964) focused on the intra-role context and proposed that when an individual encountered incompatible demands within a role (e.g. working faster while making fewer mistakes), that individual would experience stress as a result. Greenhaus and Beutell (1985) extended the initial conceptualization of role theory to include the inter-role context. Specifically, they focused on the work and family roles and proposed that when demands arising from one role were incompatible with demands arising from another, WFC would result.

A key tenet of role theory is that demands on an individual are originating from different sources. As such, *the source of the demands is of great importance within role theory* and should have an impact on outcomes. Given this, within an SJ situation we propose that the fact that demands or WFC originate from two separate sources (i.e. Jobs 1 and 2) is significant. That is, we propose that instead of simply adding together to influence well-being, conflict between the second work role and the family role will actually compound the influence of conflict between the first work role and the family role and well-being. Because, unlike COR theory, role theory

differentiates between the type and source of demands, WFC from each of the work roles could theoretically interact with WFC from the other role to influence well-being. This situation would represent an interactive model, where the WFC produced from each job could amplify the effects of WFC produced from the other job. As a result, this effect would be stronger than the additive effect predicted by COR theory.

Given our predictions based on COR and role theory, we hypothesize two alternative and competing sets of hypotheses:

H1a–d: The WFC experienced for Jobs 1 and 2 will combine additively to predict well-being (emotional exhaustion, physical symptoms, life satisfaction, and exercise).

H2a–d: The WFC experienced for Jobs 1 and 2 will combine interactively to predict well-being (emotional exhaustion, physical symptoms, life satisfaction, and exercise).

Methods

Research context

In order to assess our hypotheses, firefighters were chosen as the sample. Firefighters were selected because of the high prevalence of SJ within the occupation. Focusing on a sample where SJ is prevalent allowed us to collect sufficient data without resorting to methods such as snowball sampling. In addition, because firefighting is typical of jobs with high proportions of SJ (e.g. teachers, police), our results should be highly generalizable to these occupations.

Firefighters who participated in this study were from a large, Midwestern city. Because of budgetary issues, few firefighters have been hired across the past 15 or so years, which resulted in older, but more experienced, fire personnel. Represented in this study are three job types: pumper, hook and ladder, and rescue squad. Pumper employees are primarily responsible for fire suppression, whereas hook and ladder employees are primarily responsible for victim rescue. Rescue squad personnel are first responder units, and respond to fires, medical emergencies, and car accidents. No major events took place during the collection of this data that were unique to the fire department.

Participants and procedures

Participants were recruited for this study as part of a two-wave, grant-funded survey study on firefighters. Before recruitment began, the study was first approved by the Institutional Review Board (IRB) at Bowling Green State University. Two weeks prior to the Time 1 data collection, a notice was circulated among all firehouses in the city, alerting firefighters that they would be contacted for a study that was sanctioned by the chief of the fire department. Once the study began, the chief issued a formal departmental order, encouraging participation and ensuring confidentiality. A total of 642 survey packets were sent to valid home addresses of all firefighters working 24-shift work (the typical firefighter works 24-hour shifts, with 48 hours off between shifts). The packets included a letter from the chief, an informed consent document, the survey, and a postage-paid return envelope. A link to an internet survey was also provided in case the participant would prefer filling out the survey online. Those who participated in the first wave of surveys were invited to participate

in the second data collection, with surveys once again being sent out as hardcopies with online options. There were no systematic differences between the firefighters who used the online vs paper copies of the survey (and 90% returned the paper copies).

Out of 642 firefighters, a total of 179 participated in both waves of data collection. Of these 179, 128 (72%) reported having second jobs, and were therefore included as the final sample. These firefighters were all male, and were primarily white (76%). They had an average age of 47.4 (SD = 5.9), and had been employed as firefighters for approximately 20.8 years (SD = 6.0). According to the fire chief, the characteristics of this final sample accurately reflects the demographics of firefighters in the city, where the average age of firefighters is approximately 45, and the majority are male (99.5%) and white (75%). There was quite a bit of variance in the nature of the second job; the most frequently reported jobs were health care, construction, skilled trade, and transportation. As a final note, we found no systematic differences in terms of the study variables between SJ firefighters and non-SJ firefighters, save that SJ firefighters tended to be slightly younger ($M_D = 3.2$, $t(177) = 2.99$, $p < .01$).

Measures

Unless otherwise noted, participants were asked to respond to each measure using the past month as a time frame. Control variables were assessed during Time 1, and all other measures were assessed during Time 2.

Controls.[1] Negative affectivity (NA), which refers to predisposition to experience negative emotions (e.g. anger, contempt, disgust), was used as a control variable. NA was assessed using the Positive and Negative Affectivity Scale (PANAS; Watson, Clark, & Tellegen, 1988). The NA facet of this measure (10 items; $\alpha = .83$) consists of single word adjectives that described emotions. Participants were asked to think whether they generally feel that way, or if they feel this way on average, and items were rated on a five-point Likert-type scale, where 1 = very slightly or not at all, and 5 = extremely. Example items include 'afraid' and 'distressed.' In addition, occupational tenure (years as a firefighter) was assessed as a control variable.

Independent variables. Work interference with family (WIF) and family interference with work (FIW) were assessed using the scale developed by Carlson and colleagues (2000). This scale assesses three types of conflict: time based, strain based, and behavior based (which was omitted from this study). Twelve total items are used to assess time-based WIF and FIW, and strain-based WIF and FIW. Items were nested within sections of the survey referring to 'First Job: Firefighting' and 'Second Job'. Thus, it was clear to participants that the WFC items referred to these jobs separately. Further, the measure instructions were edited to refer to an individual's jobs separately. For example, instructions for the Job 1 WFC measure indicated that participants should think only of their firefighting job when answering the questions. Results were the same for both types (time, strain) and directions (work to family, family to work) of conflict, and thus composite scores were created. The composite measures were labeled 'work 1 family conflict' (W1FC; 12 items; $\alpha = .89$) and 'work 2 family conflict' (W2FC; 12 items; $\alpha = .88$). Each item was rated on a five-point agreement scale, where 1 = strongly disagree and 5 = strongly agree.

Dependent variables. The Physical Symptoms Inventory (PSI; Spector & Jex, 1998) was used to assess physical health. The PSI has 18 items ($\alpha = .79$), each a type of health problem (e.g. headaches, fatigue, trouble sleeping). Items are rated on a three-point

response scale, where 1 = did not experience, 2 = experienced but did not see a doctor and 3 = experienced and did see a doctor. Higher scores on this scale indicate worse physical health.

Emotional exhaustion was measured with the seven-item Emotional Exhaustion subscale of the Burnout Measure (Pines & Aronson, 1988; $\alpha = .88$). Respondents were asked to think about and indicate the frequency of these symptoms (e.g. being 'wiped out', feeling rundown) using a seven-point Likert-type scale, where 1 = never, and 7 = always.

Life satisfaction was assessed using the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985). This five-item scale ($\alpha = .86$) was developed to assess global life satisfaction, and does not overlap with related constructs such as depression and loneliness. An example item is 'In most ways, my life is close to my ideal.' Participants respond to items on a five-point Likert agreement scale, where 1 = strongly disagree and 5 = strongly agree.

To gain a better understanding of how WFC affected our participants' actual behaviors, we chose to measure exercise. Exercise is ideal in this case because it gives us insight into how the physical weariness brought on by firefighting might impact physical activity outside work. In addition, because exercise is clearly linked to such important health outcomes as cardiovascular disease, we felt it was an important outcome to assess. Exercise was assessed using the four-item ($\alpha = .74$) Concise Physical Activity Questionnaire (Sliter & Sliter, 2014). Items represent categories of physical activity (light, moderate, vigorous aerobic, and muscle-strengthening), and respondents indicate how many days, on average, they performed each for at least 20 consecutive minutes during the last month. Participants responded on a four-point scale, where 1 = 1 day per week or less than weekly to 4 = 6–7 days per week. Participants can also indicate that they are physically unable/not medically allowed to do this, or chose not to do this (coded as a 0).

Analytic strategy

Hierarchical regression was used to test our hypotheses. We followed the same procedures as past researchers testing additive versus interactive effects (e.g. Parkes, 1991; Parkes, Mendham, & von Rabenau, 1994). First, control variables were added in Step 1 of four separate analyses predicting the four outcomes. In Steps 2 and 3, the additive effects of WFC for the first and second jobs were added in order. A significant increase in variance explained from Steps 2 to 3 provides evidence of an additive effect of second job WFC, because it indicates that WFC from the second job has additional explanatory power above and beyond that from the first job. In Step 4, a cross product of WFC for the first and second jobs was added, following the procedure outlined by Baron and Kenny (1986). Before computing this cross product, the variables were standardized, which reduces problems associated with multicollinearity and increases interpretability (Cohen, West, & Aiken, 2003). A significant change in the variance explained from Steps 3 to 4 provides evidence of a significant moderation (interactive) effect because it indicates that the presence of one predictor changes (amplifies) the relationship between the other predictor and the outcome. Significant interactions were graphed, and simple slope analyses (Aiken & West, 1991) were calculated to determine whether the change in slopes was significant from low levels of the moderator to high levels of the moderator.

Results

To provide some context for the hypothesis testing, descriptive statistics and correlations among all variables are presented in Table 1. In terms of conflict, first job WFC related positively with emotional exhaustion and physical symptoms and negatively with life satisfaction. Second job WFC, however, related significantly with all outcomes, including exercise. In terms of the control variables relating to outcomes, NA significantly related to emotional exhaustion and physical symptoms. Tenure only significantly related to exercise.

In order to test H1a, that second job WFC will predict additional variance in emotional exhaustion above and beyond first job WFC, we first examined additive effects. The additive model was supported, with second job WFC predicting 3% additional variance in emotional exhaustion above and beyond first job WFC (Table 2). To test H2a, we next examined the multiplicative effect of WFC across two jobs. This model was also supported, with the significant interaction term ($\beta = .66$, $p < .001$) predicting an additional 10% of the variance in emotional exhaustion. The form of this interaction was graphed and further examined (Figure 1). The relationship between first job WFC and emotional exhaustion was much stronger when second job WFC was high (simple slope = 1.14, $p < .001$) than when it was low (simple slope = .37, $p < .01$).

To test H1b, that second job WFC will predict additional variance in physical symptoms above and beyond first job WFC, we first examined the additive effects. The additive model was supported, with second job WFC predicting 6% additional variance in physical symptoms. To test H2b, we examined the interactive model. This model was also supported, with the significant interaction term ($\beta = .20$, $p < .01$) predicting an additional 4% of variance in physical symptoms. This interaction was graphed and further examined (Figure 2). The relationship between first job WFC and physical symptoms was stronger when second job WFC was high (simple slope = .34, $p < .001$) than when it was low (simple slope = .15, $p < .05$).

H1c, that second job WFC will predict additional variance in life satisfaction above and beyond first job WFC, was tested in the same manner. The additive model was *not* supported in this case, as second job WFC did not predict additional variance in life satisfaction. H2c, however, was supported, with the significant

Table 1. Descriptive statistics and correlations among all variables.

Variables	*M*	SD	1	2	3	4	5	6	7	8
1. W1FC	2.87	.77	*.89*	–	–	–	–	–	–	–
2. W2FC	2.44	.85	.60	*.88*	–	–	–	–	–	–
6. Emotional exhaust	2.30	1.11	.68	.47	*.88*	–	–	–	–	–
7. Physical symptoms	1.32	.20	.60	.53	−.71	*.79*	–	–	–	–
8. Life satisfaction	3.45	.78	−.29	−.36	−.58	−.40	*.86*	–	–	–
9. Exercise	1.92	.88	−.08	−.28	−.20	.13	.24	*.74*	–	–
10. Tenure	20.80	6.01	.12	.21	−.09	.01	−.06	−.42	–	–
11. NA	1.50	.40	−.03	−.14	.17	−.31	−.13	.14	−.32	*.83*

Notes: W1FC = work 1 family conflict; W2FC = work 2 family conflict; NA = negative affectivity; $n = 128$; Cronbach's alpha is indicated along the diagonal where appropriate. Correlations ≥ .15 are significant at the $p < .05$ level. Correlations ≥ .21 are significant at the $p < .01$ level.

Table 2. Additive and interaction regression analysis results.

	Step 1 β	Step 2 β	Step 3 β	Step 4 β
Emotional exhaustion				
Tenure	−.04	−.09	−.10	−.09
NA	.16	.11	.12	.08
W1FC		.71**	.61**	.70**
W2FC			.17**	.09
W1FC × W2FC				.34**
R2	.03	.53	.56	.66
Change R2	.03	.50**	.03*	.10**
Physical symptoms				
Tenure	.06	.02	.01	.00
NA	.16	.12	.14	.17
W1FC		.61**	.44**	.39**
W2FC			.31**	.36**
W1FC × W2FC				.20**
R2	.02	.40	.46	.50
Change R2		.38**	.06**	.04**
Life satisfaction				
Tenure	.03-	.09	.08	.08
NA	.21*	.21*	.21*	.19*
W1FC		−.39**	−.34**	−.30**
W2FC			−.09	−.18
W1FC × W2FC				−.29**
R2	.04	.19	.20	.27
Change R2		.15**	.01	.07**
Exercise				
Tenure	−.41**	−.40**	−.38**	−.38**
NA	.03	.04	.02	.01
W1FC		−.18*	.01	.02
W2FC			−.31**	−.32**
W1FC × W2FC				.04
R2	.18	.21	.27	.27
Change R2		.03*	.06**	.00

Notes: Step 1: control variables; step 2: W1FC added; step 3: W1FC added; step 4: interaction term (W1FC × W2FC) added.
$n = 128$; *$p < .05$; **$p < .01$.

interaction term ($\beta = -.29$, $p < .01$) predicting an additional 7% of variance in life satisfaction. The interaction graph (Figure 3) showed that the relationship between first job WFC and life satisfaction was stronger when second job WFC was high (simple slope = −.39, $p < .001$) than when it was low (simple slope = .22, $p > .05$).

Finally, we tested H1d and found that the additive model was supported, with second job WFC predicting 6% additional variance in exercise, above and beyond first job WFC. Interestingly, however, first job WFC was not a significant predictor of exercise after the addition of second job WFC. H2d was not supported, however, given that the increase in variance for the step involving the interaction term was not significant.

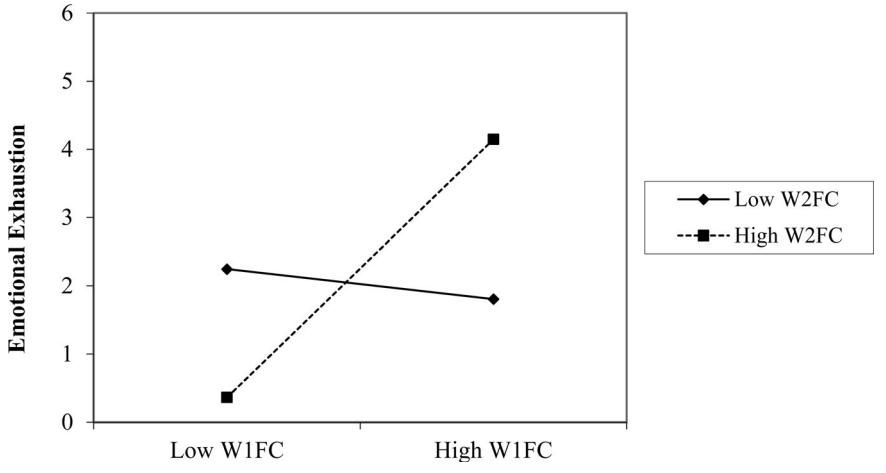

Figure 1. The multiplicative effect of first job WFC and second job WFC on emotional exhaustion.

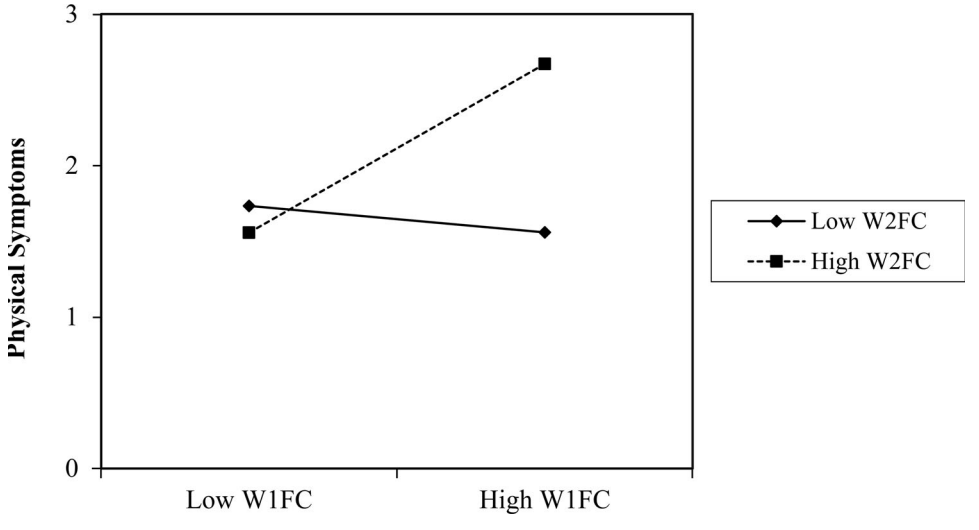

Figure 2. The multiplicative effect of first job WFC and second job WFC on physical symptoms.

Discussion

In this study, we tested whether the WFC from second jobholders' first and second jobs had an additive or interactive effect on four measures of well-being: life satisfaction, physical health, emotional exhaustion, and exercise. The interactive model was supported for emotional exhaustion, physical symptoms, and life satisfaction. This finding coincides with the role theory (e.g. Greenhaus & Beutell, 1985) explanation for how conflict occurs. That is, conflict from each of the jobs an individual holds appears to represent an independent stressor that interacts with other sources of

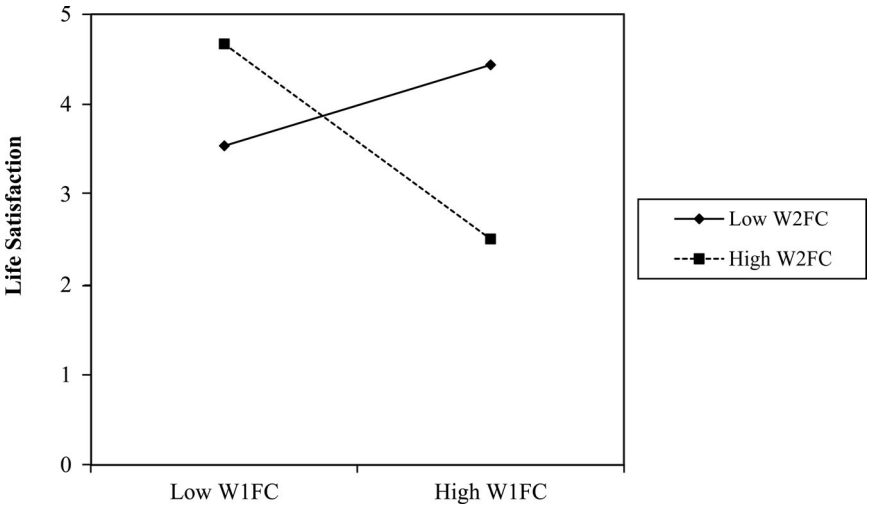

Figure 3. The multiplicative effect of first job WFC and second job WFC on life satisfaction.

conflict to influence well-being. In addition, the nature of the interaction provides more insight into how WFC from both jobs affected life satisfaction, physical health, and emotional exhaustion. For individuals experiencing high WFC with their second job, the relationship between WFC for the first job and well-being was much stronger. That is, having higher WFC in Job 2 seems to magnify the effects of WFC from Job 1.

This finding makes sense in light of the fact that having to combine two jobs, each with its own requirements in terms of time, scheduling, and perhaps even commuting, is quite a challenge and thus likely to produce a great deal of strain. These findings also coincide nicely with the burgeoning literature on psychological detachment from work. Research on detachment finds that the effects of WFC or spillover are attenuated when an individual is able to psychologically detach from work while at home (Sonnentag & Binnewies, 2013). That is, people who can mentally disengage from work and from the associated feelings of stress are better off than those who cannot. Holding a second job may make disengagement from work-related cognitions much more difficult, because hours that would be dedicated to nonwork activities are instead spent at work (albeit in a different working context). It is perhaps not surprising, then, that when additional stress is experienced within the second job, the effects of WFC from the first job are magnified.

By contrast, the interactive model was not supported when examining exercise as an outcome. Rather, the effect of WFC from the two jobs on exercise appeared to be additive. This finding coincides with the proposed COR explanation, where resources are relatively one dimensional in terms of their loss and gain. Energetic resources, particularly, may be susceptible to the additive effects of stressors as they are most clearly bound to physical and time demands (e.g. if a person works two jobs, they may simply not have enough physical energy or time to exercise). Psychological outcomes, on the other hand (such as emotional exhaustion and life satisfaction), may be more susceptible to interactive effects due to the complex interplay between roles.

In addition to our specific findings, this study contributed to the growing literature that is making strides toward broadening the conceptualization of WFC. Our study is the first to explore WFC for individuals with a second job, and thus to broaden consideration of what the 'work' side of the WFC equation actually means. Some new research in the area of WFC has begun to illustrate the importance of considering an individual's life roles separately (Keeney, Boyd, Sinha, Westring, & Ryan, 2013). However, this research focused only on dividing nonwork roles. Focusing on second job holders not only provides us with important insight into the experiences of a large subset of the workforce, it also gives us a unique lens through which to view the nature of WFC.

Our results also contribute to the literature on second jobs. As was noted above, the literature on second jobholding is remarkably sparse, and recent interest in SJ seems even lower than in the past with one notable recent exception (Sliter & Boyd, 2014). Although almost all past research on SJ has focused on whether individuals working second jobs are better or worse off than individuals working only one job, a recent call for more research on second job holders noted that

> A starting point would be to establish how demands from both jobs impact employee strain outcomes. A more refined question would be to examine whether these demands are additive or multiplicative in impacting employee strain. There is evidence that work stressors can either be additive (such as simply increasing work hours) or interactive (where demands in one role exacerbate the negative effects of the other), and either could be an explanation for the impact of MJH. (Sliter & Boyd, 2014; p. 1044)

Our results speak directly to this issue and provide evidence that, at least when it comes to WFC, second jobholders appear to face additional challenges and may be at greater risk for negative psychological and physical consequences than their single-job counterparts. In addition, working a second job appears to represent more complexity than simply an increase in hours worked.

Further, although our results are limited to the circumstance where people are working two jobs concurrently, it stands to reason that they may also extend to the situation where people work at one job while also engaging in full- or part-time study. Some authors have begun to explore this area of potential 'work–school conflict' (e.g. Butler, 2007) and our research provides further evidence that such conflict may be important.

In terms of practical implications, it was noted above that at least 4–5% of the US and UK workforces work multiple jobs (BLS, 2013; Dickey et al., 2011). Our results indicate that for three of the four well-being outcomes assessed, the effects of the WFC experienced from multiple jobs is actually multiplicative, indicating that the negative effects of WFC's stressful nature may actually be magnified by working multiple jobs at once rather than working one job for the same amount of hours. For those considering working multiple jobs, then, extra consideration may thus be required regarding WFC. Segmenting one's work and family roles has been shown to be an effective strategy for preventing conflict between roles (e.g. Ashforth, Kreiner, & Fugate, 2000) and as such individuals attempting to successfully navigate multiple jobs without a great degree of conflict may want to consider adopting the strategy of segmenting each of their work roles from their family role. Moreover, they may want to give careful consideration to which strategies work best for them in managing their work–family needs.

Finally, specifically related to the sample-at-hand – firefighters – SJ might be particularly tempting and yet difficult. Many firefighters are attracted to the profession due to the flexible schedule; most firefighters work 24 hour shifts with 48 hours off. This creates a situation where firefighters find it easy to take a second job (perhaps too easy). As a result, firefighter might quickly become burdened by this second job and possible overcommitted (many firefighters in our sample indicated that they worked multiple additional jobs), and this can easily create higher levels of WFC, and, ultimately, the negative outcomes that we saw in the results. Such negative outcomes can be particularly problematic in the firefighter context, as exhausted firefighters could pose a threat to both themselves and others when exposed to emergency situations. As such, lessening the possible negative effects of multiple forms of WFC is very important in this occupation, and certainly important to investigate such ways in the future.

Limitations and directions for future research

Though this study has several strengths, it is not without limitations. First, all measures were assessed using self-report, which raises concerns regarding common method variance (CMV; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). That is, it is possible that some of the relationships found in this study were partially influenced by the method (e.g. survey response). We did, however, take steps to reduce CMV. In order to reduce effects associated with fatigue, the order of outcome measures were randomized for the online version of the survey, and four different orders of paper surveys were sent out. In addition, unlike many studies in the WFC area, we statistically controlled for negative affectivity (NA). NA is a variable long known to affect relationships among stress-related variables, and as a result is highly applicable to research on WFC (Burke, Brief, & George, 1993). Future research could do more to prevent the effects of CMV by assessing participants at multiple points in time. More specifically, measuring WFC at one point in time and outcomes at a second point in time would reduce the likelihood for CMV. In addition, measuring objective employee outcomes such as absenteeism or performance could help alleviate this concern.

Second, all of our participants were white male firefighters. This homogeneity could reduce the generalizability of our sample. Moreover, because women perform the majority of unpaid care and domestic work (Bianchi, Sayer, Milkie, & Robinson, 2012) gender may play an important role in the relationship between SJ and work–life issues. Women who perform second jobs may experience more serious consequences as a result, as they attempt to juggle those jobs with increased care and household responsibilities. Moreover, for some occupations where SJ is common (e.g. teaching) women make up the majority of employees. As such, we strongly encourage future researchers to investigate the impact of gender and parenting on the relationship between SJ and work–life issues. However, for many other occupations where SJ is common (e.g. police, firefighting), our sample is highly representative of the population.

In addition, all the firefighters in our sample worked the same number of hours at their first job. Thus, hours per week of work at Job 1 was essentially held constant. We were not allowed to request information on the numbers of hours worked in the second job (due to recent bad press in terms of firefighters 'selling'

shifts to work more part-time, this information was perceived as too sensitive). As a result, we could not compare individuals working the same number of hours but working different numbers of jobs (e.g. one vs two). Doing so would provide interesting insight into whether the WFC from one job really is different from the WFC from two separate jobs.

Conclusion

The purpose of this study was to explore the WFC experiences of individuals who hold a second job. Specifically, we tested opposing theoretical arguments regarding the relationship between WFC from two jobs held by the same person. Our results indicated that for emotional exhaustion, physical symptoms, and life satisfaction, the effects of WFC from two jobs is interactive but that for exercise, the effects of WFC from two jobs is additive. In both cases, the additional WFC experienced as a result of working a second job contributed to the prediction of well-being over and above WFC from the first job. Our results contribute to the literatures on WFC and second jobholding and will hopefully spur more interest in this area of research.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This research study was (partially) supported by the National Institute for Occupational Safety and Health Pilot Research Project Training Program of the University of Cincinnati Education and Research Center Grant #T42/OH008432-06.

Note

1. Race and age were also considered as control variables, but were omitted from the article as they had no significant impact on the statistical models.

Notes on contributors

Elizabeth M. Boyd is an Assistant Professor of Management and Entrepreneurship at Kennesaw State University and the Research Director for the Coles College of Business Women's Leadership Center. She received her PhD in Organizational Psychology from Michigan State University. Her research interests revolve around the work–life interface and the study of women's leadership.

Michael T. Sliter is an Assistant Professor of Psychology at Indiana University-Purdue University Indianapolis. He received his PhD in I/O Psychology at Bowling Green State University. His research tends to focus on workplace incivility, counterproductive workplace behavior, emotions and emotional labor, and, more recently, positive psychology topics (e.g. engagement, coping).

Sarah E. Chatfield obtained her BA in Psychology from Southwestern University and her MS in I/O Psychology from IUPUI. Her main research interests include work–life balance and gender issues in the workplace. Following her graduation in May 2013 she moved to New York City and began a career as a Consultant with Aon Hewitt.

References

Aiken, L. S., & West, S. G. (1991). Multiple regression: Testing and interpreting interactions. Thousand Oaks, CA: Sage.

Allen, T. D., Herst, D. E., Bruck, C. S., & Sutton, M. (2000). Consequences associated with work-to-family conflict: A review and agenda for future research. *Journal of Occupational Health Psychology*, *5*, 278–308.

Amstad, F. T., Meier, L. L., Fasel, U., Elfering, A., & Semmer, N. K. (2011). A meta-analysis of work-family conflict and various outcomes with a special emphasis on cross-domain versus matching-domain relations. *Journal of Occupational Health Psychology, 16*, 151–169.

Arcuri, A. (1987). Moonlighting by police officers: A way of life. *Psychological Reports, 60*, 210.

Ashforth, B. E., Kreiner, G. E., & Fugate, M. E. (2000). All in a day's work: Boundaries and micro role transitions. *The Academy of Management Review*, *35*, 472–491.

Bainbridge, H. T. J., Cregan, C., & Kulik, C. T. (2006). The effect of multiple roles on caregiver stress outcomes. *Journal of Applied Psychology, 91*, 490–497.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173–1182.

Batt, R., & Valcour, P. M. (2003). Human resources practices as predictors of work-family outcomes and employee turnover. *Industrial Relations: A Journal of Economy and Society, 42*, 189–220.

Bedeian, A. G., Burke, B. G., & Moffett, R. G. (1988). Outcomes of work-family conflict among married male and female professionals. *Journal of Management, 14*, 475–491.

Bianchi, S. M., & Milkie, M. A. (2010). Work and family research in the first decade of the 21st century. *Journal of Marriage and Family, 72*,705–725.

Bianchi, S. M., Sayer, L. C., Milkie, M. A., & Robinson, J. P. (2012). Housework: Who did, does or will do it, and how much does it matter? *Social Forces, 91*, 55–63.

Bureau of Labor Statistics U.S. Department of Labor (BLS). (2013, October). The employment situation—September 2013. Retrieved November 1, 2013, from http://www.bls.gov/news.release/pdf/empsit.pdf

Burke, M. J., Brief, A. P., & George, J. M. (1993). The role of negative affectivity in understanding relations between self-reports of stressors and strains: A comment on the applied psychology literature. *Journal of Applied Psychology, 78*, 402–412.

Butler, A. (2007). Job characteristics and college performance and attitudes: A model of work-school conflict and facilitation. *Journal of Applied Psychology, 92*, 500–510.

Byron, D. (2005). A meta-analytic review of the work-family conflict and its antecendents. *Journal of Vocational Behavior, 67*, 169–198.

Carlson, D. S., Kacmar, K. M., & Williams, L. J. (2000). Construction and initial validation of a multidimensional measure of work–family conflict. *Journal of Vocational Behavior, 56*, 249–276.

Cohen, J. C., West, P., & Aiken, S. G. (2003). *Applied multiple regression/correlation analysis for the behavioral science* (3rd ed.). Hillsdale, NJ: Erlbaum.

Dempster-McClain, D., & Moen, P. (1989). Moonlighting husbands: A life-cycle perspective. *Work and Occupations*, *16*, 43–64.

Dickey, H., Watson, V., & Zangelidis, A. (2011). Is it all about money? An examination of the motives behind moonlighting. *Applied Economics, 43*, 3767–3774.

Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49*, 71–75.

Dierdorff, E. C., & Ellington, J. K. (2008). It's the nature of the work: Examining behavior-based sources of work-family conflict across occupations. *Journal of Applied Psychology, 93*, 883.

Eby, L. T., Casper, W. J., Lockwood, A., Bordeaux, C., & Brinley, A. (2005). Work and family research in IO/OB: Content analysis and review of the literature (1980–2002). *Journal of Vocational Behavior, 66*, 124–197.

Ford, M. T., Heinen, B. A., & Langkamer, K. L. (2007). Work and family satisfaction and conflict: A meta-analysis of cross-domain relations. *Journal of Applied Psychology, 92*, 57–80.

Frone, M. R., Russell, M., & Barnes, G. M. (1996). Work–family conflict, gender, and health-related outcomes: A study of employed parents in two community samples. *Journal of Occupational Health Psychology, 1*, 57–69.

Frone, M. R., Russell, M., & Cooper, M. L. (1992). Antecedents and outcomes of work-family conflict: Testing a model of the work-family interface. *Journal of Applied Psychology, 77*, 65–78.

Frone, M. R., Russell, M., & Cooper, M. L. (1997). Relation of work–family conflict to health outcomes: A four-year longitudinal study of employed parents. *Journal of Occupational and Organizational Psychology, 70*, 325–335.

Grandey, A. A., & Cropanzano, R. (1999). The conservation of resources model applied to work–family conflict and strain. *Journal of Vocational Behavior, 54*, 350–370.

Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of Management Review, 10*, 76–88.

Guest, D. (2002). Human resource management, corporate performance and employee well-being: Building the worker into HRM. *Journal of Industrial Relations, 44*, 335–358.

Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Applied Psychology, 50*, 337–421.

Jamal, M., Baba, V. V., & Riviére, R. (1998). Job stress and well-being of moonlighters: The perspective of deprivation or aspiration revisited. *Stress and Health*, *14*, 195–202.

Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snoek, J., & Rosenthal, R. A. (1964). *Organizational stress: Studies in role conflict and ambiguity*. Oxford: Wiley.

Keeney, J., Boyd, E. M., Sinha, R., Westring, A. J., & Ryan, A. M. (2013). From "work-family" to "work-life": Broadening our conceptualization and measurement. *Journal of Vocational Behavior*, *82*, 221–237.

Kelly, E. L., Kossek, E. E., Hammer, L. B., Durham, M., Bray, J., Chermack, K., … Kaskubar, D. (2008). Getting there from here: Research on the effects of work-family initiatives on work-family conflict and business outcomes. *Academy of Management Annals*, *2*, 305–349.

Kossek, E., & Ozeki, C. (1998). Work–family conflict, policies, and the job–life satisfaction relationship: A review and directions for organizational behavior–human resources research. *Journal of Applied Psychology*, *83*, 139–149.

Kossek, E. E., Baltes, B. B., & Matthews, R. A. (2011). How work–family research can finally have an impact in organizations. *Industrial and Organizational Psychology, 4*, 352–369.

Miller, G. W., & Sniderman, M. S. (1974). Multijobholding of Wichita public school teachers. *Public Personnel Management, 3*, 392–402.

Moen, P. (2011). From 'work–family' to the 'gendered life course' and 'fit': Five challenges to the field. *Community, Work & Family, 14*, 81–96.

National Education Association of the United States Research Division. (1996). *NEA* national educational support personnel membership study. Washington, DC: Author.

Nixon, A. E., Mazzola, J. J., Bauer, J., Krueger, J. R., & Spector, P. E. (2011). Can work make you sick? A meta-analysis of the relationships between job stressors and physical symptoms. *Work & Stress, 25*, 1–22.

Parham, J. N., & Gordon, S. P. (2011). Moonlighting: A harsh reality for many teachers. *Phi Delta Kappan, 92*, 47–51.

Parkes, K. R. (1991). Locus of control as a moderator: An explanation for additive versus interactive findings in the demand-discretion model of work stress? *British Journal of Psychology, 82*, 291–312.

Parkes, K. R., Mendham, C. A., & von Rabenau, C. (1994). Social support and the demand-discretion model of job stress: Tests of additive and interactive effects in two samples. *Journal of Vocational Behavior, 44*, 91–113.

Pearson, L. C., Carroll, D., & Hall, B. W. (1994). Analysis of demographic, perceptual, and work-related factors in teacher moonlighting. *The Journal of Educational Research, 87*, 304–308.

Pines, A. M., & Aronson, E. (1988). *Career burnout: Causes and cures*. New York, NY: Free Press.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of* Applied Psycho*logy, 88*, 879–903.

Santangelo, S., & Lester, D. (1985). Correlates of job satisfaction of public school teachers: Moonlighting, locus of control, and stress. *Psychological Reports, 56*, 130.

Sliter, K. A., & Sliter, M. T. (2014). The concise physical activity questionnaire (CPAQ): Its development, validation, and application to firefighter occupational health. *International Journal of Stress Management, 21*, 283–305.

Sliter, M. T., & Boyd, E. M. (2014). Two (or three) is not equal to one: Multiple jobholding as a neglected topic in organizational research. *Journal of Organizational Behavior, 35*, 1042–1046.

Sonnentag, S., & Binnewies, C. (2013). Daily affect spillover from work to home: Detachment from work and sleep as moderators. *Journal of Vocational Behavior, 83*, 198–208.

Spector, P. E., & Jex, S. M. (1998). Development of four self-report measures of job stressors and strain: Interpersonal conflict at work scale, organizational constraints scale, quantitative workload inventory, and physical symptoms inventory. *Journal of Occupational Health Psychology, 3*, 356–367.

Thomas, L. T., & Ganster, D. C. (1995). Impact of family-supportive work variables on work-family conflict and strain: A control perspective. *Journal of Applied Psychology, 80*, 6–15.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063–1070.