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## Work, family and life-course fit:

### Does control over work time matter? \*

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### Abstract

This study moves from “work-family” to a multi-dimensional “life-course fit” construct (employees’ cognitive assessments of resources, resource deficits, and resource demands), using a combined work-family, demands-control and ecology of the life course framing. It examined (1) impacts of job and home ecological systems on fit dimensions, and (2) whether control over work time predicted and mediated life-course fit outcomes. Using cluster analysis of survey data on a sample of 917 white-collar employees from Best Buy headquarters, we identified four job ecologies (corresponding to the job demands-job control model) and five home ecologies (theorizing an analogous home demands-home control model). Job and home ecologies predicted fit dimensions in an additive, not interactive, fashion. Employees’ work-time control predicted every life-course fit dimension and partially mediated effects of job ecologies, organizational tenure, and job category.

### Keywords

Work-family; Job and home ecologies; Life-course fit; Job strain; Role train/enhancement; Demand-control; Work time control; Control over work time; Job and home systems

## 1. Introduction

Two lines of scholarship have pursued parallel but, for the most part, independent theoretical and empirical tracks, yet we contend and find that both are necessary for understanding life-course fit, defined as employees’ cognitive assessments of various dimensions of resources, resource deficits, and the match or mismatch between resources and resource demands. Such appraisals capture a sense of the quality of employees’ lives (Grzywacz & Bass, 2003; Moen, Kelly, & Huang, 2008; Voydanoff, 2005).

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One line of scholarship, drawn from occupational health psychology, has followed the *job demands—job control model* (also called the *job strain* model) developed by Karasek and Theorell (1990). This model claims that psychosocial work environments— especially high psychological demands and low job control—negatively impact employee health and well-being. This model, as extended and developed over the last several decades, has been enormously influential (e.g., Butler, Grzywacz, Bass, & Linney, 2005; de Jonge, Bosma, Peter, & Siegrist, 2000) despite the fact that some studies do not support Karasek and Theorell’s job strain thesis in certain populations or with certain health outcomes (e.g., Evans & Steptoe, 2002; Marshall, Sayer, & Barnett, 1997).

A second line of scholarship has examined the work-family interface, and in particular, *work-family conflict* and *negative spillover* as consequential for employee health and well-being and family processes (e.g. Byron, 2005; Eby, Casper, Lockwood, Bordeaux, & Brinley 2005; Hammer, Cullen, Neal, Sinclair, & Shafiro, 2005). Scholars have also theorized positive aspects of both work and family roles (variously termed “balance”, “enhancement,” “enrichment,” or “facilitation”) as well as the bidirectionality of work-family interconnections (see Carlson, Kacmar, Wayne, & Grzywacz, 2006; Clark, 2001; Frone, 2003; Greenhaus & Powell, 2006; Wayne, Grzywacz, Carlson, & Kacmar, 2007). Work-family scholars have no single overriding theory of actual conditions predicting positive or negative work-family spillover and conflict, with the possible exception of *role strain* theory (Goode, 1960), suggesting that occupying two or more roles creates competing demands and expectations, and *role expansion/enhancement theory* (Marks, 1977; Sieber, 1974) arguing that occupying multiple roles provides a greater number of opportunities and resources.

There are good theoretical as well as pragmatic reasons for considering these two approaches as complementary, with each offering potential “value-added” to the other. First, work-family scholars tend to concentrate on particular types of employees (women, parents, or single-parents), paying less attention to the *conditions under which employees work* (with the exception of work hours or shift work; e.g., Fenwick & Tausig, 2001). Yet, as Hertz (1999, p. 17) pointed out, “Employers are the silent partners in the life of all families,” meaning that working conditions may be as important as family conditions for understanding life quality. Second, occupational health scholars using the job strain model focus almost exclusively on job conditions. While they often include family data in their models, it is usually as controls, not fully theorizing their impacts. Such “work environment” research tends to target men or else employees as a group, often without hypotheses about gender, family circumstances, or life stage effects. And yet it could be argued that employees’ families are the silent partners in the life of every organization. Third, the work-family literature focuses on competing demands and resources separately, while the job strain literature focuses on the interface between job demands and the key resource of job control. Neither line of research has explicitly theorized analogous home demands and home control. Fourth, while work-family scholars increasingly emphasize the importance of control over work time and flexibility as ways of reducing work-family conflict, job strain scholars theorize job control (or autonomy) but not control over work time.

The goals of this study were to further integrate the occupational health (job strain) and work-family literatures by (1) introducing the concept of *life-course fit* to describe employees’ cognitive assessments about their work-family resources and the match or mismatch between resources and demands; (2) evaluating the impacts of constellations of both job and home conditions as *ecological systems*, rather than as variables operating “net” of other variables; and (3) examining the direct and mediating effects of employees’ *control over working time* on various dimensions of life-course fit.

These goals motivated the empirical research questions we addressed: are there distinctive identifiable patterns (ecologies) characterizing employees' demand/control conditions at home as well as their conditions on the job? Do job and home ecologies equally predict employees' assessments of various dimensions of life-course fit, and are their effects additive or does one moderate the other? Do employees' job ecologies predict the theoretically key resource of control over work time? Does control over work time function as a mediator between job and home ecologies, on the one hand, and various dimensions of life-course fit, on the other?

## 2. Theoretical and conceptual contributions of a combined reframing

### 2.1. From work-family to life-course fit

The concept of *life-course fit* broadens our focus from traditional measures of the work-family interface to include as well employees' sense of time and income adequacy and their assessments of work schedule fit. Doing so moves beyond analyses of only conflicting demands and overloads between work and family roles (the resource inadequacy of work conflict and negative spillover), and/or of only the resource enhancements each provides the other (such as positive spillover), to include employees' appraisals of the *combination*—and specifically the fit or misfit—of demands and available resources. Equally important, the concept of life-course fit is applicable to employees of all ages and life stages; whereas work-family concepts are often limited to employees who are married or raising children.

Life-course fit is rooted in the cycles of control formulation of shifting resources and needs over the life course, leading individuals to feel more or less vulnerable and able to cope with the exigencies at hand at different points in their lives (Moen, Elder, & Lüscher, 1995). It also aligns with another theoretical approach for understanding stress in organizational settings, the person-environment fit model (Edwards & Rothbard, 1999). The life-course fit concept includes the person-environment fit at both work and home by gauging employees' cognitive assessments of the fit or misfit between their needs and resources in both environments (see also Lewin, 1935).

### 2.2. Job and home ecologies

We built on and extended both the job strain and the work-family role strain/enhancement models to conceptualize job conditions and family conditions as socially structured systems (ecologies) occurring in a limited number of identifiable constellations. In other words, dimensions of jobs (such as psychological demands and long hours, as well as skill discretion and decision-making authority) tend to co-occur in a limited number of patterned ecological arrangements distributed across employees.

### 2.3. Home control

Although home demands and home control have not been theorized in the same way that Karasek and Theorell (1990) modeled job demands and job control, we attempted to do so here. We theorized *home demands* and *home control* as analogous to the job demands-job control model, conceptualizing home demands as family care responsibilities. We developed the construct of home control as decision latitude, measuring it with items analogous to those in Karasek's (1979) job control scale.

### 2.4. Control over work time

Both the occupational health and the work-family literatures have recognized the importance of employees' *degree of control* over how they do their jobs and how they manage their multiple responsibilities. In the classic job strain model, job control describes latitude or autonomy regarding *how* work is done; it does not attend to control over *when* and *where* work is done. We theorize *control over work time*, defined as employees' degree of flexibility and choice

over the time, timing, and sometimes location of their work (Kelly & Moen, 2007; Kim, Moen, & Min, 2003), as an important complement to the traditional concept of job control. While job control is especially important for workers facing high *job* demands (Karasek & Theorell, 1990), work-time control may matter for workers with high *family and/or job* demands, enabling employees' to alter their work schedules in response to exigencies at home or at work.

Our conceptualization and operationalization of control over work time builds upon previous research, but departs from earlier studies in some important ways. Barnett and Brennan's (1995) measure of schedule control consisted of respondents' assessments as to whether schedule control is a valued reward or concern for them. Fenwick and Tausig (2001) found schedule control to be a stronger predictor of well-being than shift type, with schedule control serving as a mediator of shift type in their study. Duxbury, Higgins, and Lee (1994) linked perceived control to Karasek and Theorell's job strain model, asking about control of one's life more generally (i.e. personal mastery) rather than work-time control. Thomas and Ganster (1995) used a control measure closest to our own conceptualization; seven of their items directly measure work-time control.

### 3. Hypotheses

#### 3.1. Job ecologies

Research based on the job strain model has often segmented employees by whether their job demands and job control are above or below a mean or median cut-point, although some have criticized this operationalization and use continuous measures of both job demands and job control in their analysis (e.g. Elsass & Veiga, 1997). We pursued another strategy — based on cluster analysis — to inductively identify distinctive constellations (ecologies) of job conditions that existed within our sample of employees. Fig. 1 summarizes various ways of conceptualizing the links between job and home ecologies and dimensions of life-course fit. Given the primacy of paid work in contemporary society, the job strain perspective lead to the following hypothesis:

**Hypothesis 1**—Job ecologies predict both control over work time and dimensions of life-course fit (see A, Fig. 1).

We also theorized and constructed a direct measure of employees' degree of *control at home* in a way analogous to Karasek's (1979) model, that is, in terms of employees' decision authority regarding housework and family life. While family variables are often included in other research, introducing a measure of home control and considering home demands and home control together as distinctive ecological systems permitted a focus on patterned constellations of domestic conditions rather than "parceling out" independent effects of conditions that are interconnected. Because family is frequently a fundamental source of identity, support, and stress, we proposed a parallel hypothesis:

**Hypothesis 2**—Home ecologies predict dimensions of life-course fit (see A, Fig. 1).

We argued that job conditions were unlikely to have the same effects on all employees, given the diversity of their home environments. For example, in light of disjuncture between their heavy needs for family time and the inflexible clockworks of most jobs, employees raising children may be especially vulnerable to the toxicities of certain job environments (Moen & Chesley, 2008). Thus, the effects of particular job ecologies on employees' cognitive assessments of various dimensions of life-course fit may well depend on the vulnerability of employees in terms of their home ecologies, as predicted in hypothesis 3:

**Hypothesis 3**—Home ecologies moderate the effects of job ecologies on dimensions of life-course fit (see B, Fig. 1).

This hypothesis suggests that employees in ecological systems characterized by intensive family care demands and low control at home will be more negatively affected by working in demanding, low control job systems. On the other hand, job and home ecologies may each predict some or all dimensions of life-course fit in an additive fashion, rather than one moderating the other. This finding would conform with the broad literature on role strain and the stress process (e.g. Pearlin, 1999) establishing that both workplace and family conditions contribute to distress.

### 3.2. Control over work time

There is a large and growing body of scholarship on the time pressures experienced by working families, leading to a focus on control over work time and related concepts such as schedule control and “flexibility” (Ala-Mursula et al., 2006; Kelly & Moen, 2007; Kossek, Lautsch, & Eaton, 2005). Flexible schedules and control over work time have been shown to predict lower levels of work-family conflict. Because flexible schedules tend to be more available in higher status employment situations (typically characterized by high job demands, long hours and high job control), it is possible that control over work time is related to another dimension of life-course fit, a sense of income adequacy. Control over work time may also be a mediator between job conditions and fit measures. The work-family literature on time pressures and flexibility, together with evidence supporting the importance of job control in the job strain model, lead to another hypothesis:

**Hypothesis 4**—Control over work time predicts dimensions of life-course fit and partially mediates effects of job and home ecologies.

Specifically, we expect that job ecologies will predict control over work time, that control over work time will predict life-course fit, and that control over work time will partially mediate the impacts of job demands/job control on life-course fit.

## 4. Methods

### 4.1. Data

The *Flexible Work and Well-being Study* sample was drawn from non-contingent employees working in nine work groups (e.g. marketing, human resources) at Best Buy’s corporate headquarters in Minneapolis-St. Paul, Minnesota. Fully 965 out of 1212 employees completed the survey, for an 80% response rate. Of these, 917 provided complete data and thus constitute the effective sample.

Respondents were, on average, about 33 years old, worked an average of 48.5 h a week and averaged 4.68 years tenure with the organization. The sample was overwhelmingly white (as is the population in the region) and about equally divided by gender (47.5% are women). Most (70.3%) were married (or cohabiting), almost a fourth (23.1%) were raising a preschooler, and over one in 10 (11.6%) was caring for an infirm adult. Almost half (45.8%) of respondents were professionals, a third (34.0%) were managers, and the remaining fifth (20.2%) worked in technical or administrative jobs.

### 4.2. Variables

All models included gender, age group (20s, 30s, 40s or above), organizational tenure, and occupational level (managers, professionals, technical/administrative).

**4.2.1. Job ecologies**—Variables used to identify patterned job ecologies included measures of job control (decision authority and skill discretion) and job demands (psychological job demands and total number of work hours). We used Karasek's (1979) job control scales, with categories ranging from 1 to 4. His decision authority scale consists of three items including "I have a lot of say about what happens on my job" and "My job allows me to make a lot of decisions on my own." The alpha reliability coefficient for the decision authority subscale obtained from our sample was 0.65. The skill discretion scale assessed employees' control over use of their skills with six items including "My job requires a high level of skill" and "I have an opportunity to develop my own special abilities." The alpha reliability coefficient for skill discretion in our sample was 0.75.

We measured psychological job demands using Belkic's psychological job demands measure (Belkic, Landsbergis, Schnall, & Baker, 2004) plus one effort item from Siegrist et al. (2004). The resulting six item scale ranged from 1 to 4, where 1 indicated low psychological job demands and 4 indicates high psychological job demands. Typical items included, "My job requires very fast work" and "I have many interruptions and disturbances in my job." Its alpha reliability coefficient was 0.77. Total number of work hours was a single item, ranging from 32.0 to 80.0 h, with an average of 48.5 h per week.

**4.2.2. Home ecologies**—We operationalized home demands using four dichotomous variables (where 1 indicates "Yes" and 0 indicates "No"): married (or living with partner), living with children younger than 6, taking care of any infirm adults, and living with a child with a chronic health condition. Based on Karasek's (1979) job control measure, we constructed a similar two item scale of home control. The two items were "To what extent do you have the freedom to decide how to organize your household work?" and "To what extent do you have control over what happens at home?" Categories ranged from 1 to 5, where a greater score indicated feelings of having greater decision authority over what happens at home (Spearman Brown correction of Pearson's correlation was 0.84).

**4.2.3. Dimensions of life-course fit**—We examined six dimensions of life-course fit as operationalized by a work-family conflict scale, two scales of positive and negative work-family spillover, and three additional measures of time adequacy, income adequacy, and work schedule fit. These dimensions of life-course fit are theoretically and empirically related (Moen et al., 2008) but we analyzed them separately here in order to see whether job and home ecologies and control over work time are related to each outcome in similar ways.

The measure gauging work-family conflict was developed by Netemeyer, Boles, and McMurrian (1996). It is a five-item scale with scores ranging from 1 (strongly disagree) to 5 (strongly agree), a higher score indicating greater feelings of conflict in managing work and family life. Typical items in this scale include, "Things I want to do at home do not get done because of the demands my job puts on me" and "The amount of time my job takes up makes it difficult to fulfill my family/personal responsibilities." The alpha reliability coefficient for this scale obtained from our sample was 0.93.

The negative and positive work-family spillover scales, drawn from the Midlife in the United States (MIDUS) Study, measured ways in which experiences at work "spill over" into an employee's family or personal life in a detrimental or facilitating way (Grzywacz & Marks, 2000). Both scales included four items which ranged from 1 (never) to 5 (all the time), with a higher score indicating more spillover. A typical item for negative spillover includes "Has your job reduced the effort you can give to activities at home?" Typical item for positive spillover includes "Have the things you do at work help you deal with personal and practical issues at home?" The alpha reliability coefficients were 0.82 for negative work-family spillover and 0.69 for positive work-family spillover.

The time adequacy scale assessed employees' subjective sense of having "enough" time. It began with a stem and consisted of 12 items, such as, "To what extent is there time to – get enough sleep/rest, keep in shape, prepare or eat healthy meals, for your family to be together?" Response possibilities ranged from 0 to 10, with 0 being "not at all adequate" to 10 being "almost always adequate." Its alpha reliability coefficient was 0.90.

We used a single item to measure income adequacy, asking how well respondents' current household income meets their financial needs, on a scale of 1–10, where 1 is very inadequate and 10 more than adequate. It captured employees' cognitive assessments of the degree to which their incomes "fit" their economic needs.

Work schedule fit similarly gauged the degree of perceived "fit" between employees' work schedules and their personal and family lives. We used a two item scale, taken from a larger scale developed by Barnett, Gareis, and Brennan (1999) with answer categories ranging from 1 (extremely poorly) to 7 (extremely well), where a higher score indicated greater fit between the two spheres. The items in this scale were, "Taking into account your current work hours and schedule, how well is your work arrangement working for you?" and "Taking into account your current work hours and schedule, how well is your work arrangement working for your *family or personal life*?" The Spearman Brown correction of Pearson's correlation for work schedule fit was 0.87.

**4.2.4. Work time control**—The control over work time scale was derived from Thomas and Ganster (1995) with categories ranging from 1 to 5, where 1 indicated low control over work time and 5 indicated high control. Typical items in this seven-item scale included, "How much choice do you have over when you begin and end each workday?" and "How much choice do you have over when you can take a few hours off?" Its alpha reliability coefficient was 0.79.

### 4.3. Analyses

**4.3.1. Cluster analysis**—Since no single variable can fully characterize either job or home systems, we used cluster analysis to categorize cases into "homogenous" job and home ecologies, based on their responses to variables characterizing their job or home demands and job or home control. Four variables defined job ecologies: two measures of job control (decision authority, skill discretion), and two measures of job demands (psychological job demands and work hours). Home ecologies were constructed using four measures of home demands (marital status, whether raising a preschooler, whether caring for an infirm adult, whether raising a child with a health condition) and one measure of home control (decision authority). We obtained identifiable patterns (for job and home separately) by minimizing variability within the clusters and maximizing differences between them (Everitt, Landau, & Leese, 2001), using the Two-Step Cluster procedure in SPSS (version 15.0). We calculated the Bayesian Information Criterion (BIC) for a variety of clustering solutions, using this value to initially estimate the optimal number of clusters, further refined by finding the largest increase in the distance between cluster centers at each step.

**4.3.2. Hierarchical multivariate regressions**—Once job and home ecologies were identified using cluster analysis, we then tested the effects of these job and home ecologies in multivariate regression models predicting control over work time and dimensions of life-course fit. We also included in the baseline model occupational level, gender, age group, and tenure, in order to ensure that the job and home ecologies are not simply reproducing these characteristics. We next examined potential mediating effect of control over work time on the relationships between baseline model covariates and various dimensions of life-course fit. Specifically, we test whether: (a) the baseline model predicts control over work time; (b) the baseline model predicts dimensions of life-course fit; and (c) the baseline model plus control

over work time predict dimensions of life-course fit and in doing so reduces the effects of baseline variables, thereby signaling mediation by control over work time.

## 5. Results

### 5.1. Job and home ecologies

Cluster analysis led us to identify four job ecologies and five home ecologies as best characterizing the demands and control configurations experienced by these white-collar employees. (Tables are available from the authors upon request.) We labeled each identifiable ecological constellation of employees after its prominent characteristic. Table 1 summarizes the means and standard deviations for the variables used in identifying the four distinctive job ecologies found among this Best Buy sample of 917 employees.

The four job ecologies empirically reproduced job environments theorized in Karasek and Theorell's (1990) job demands-job control model. Cluster 1 ( $n = 202$ ) consisted of job arrangements with *high levels of job control and lower levels of job demands*. For example, employees in this cluster reported a mean level of skill discretion that is 0.76 of a standard deviation above the mean of the whole sample, along with a mean level of decision authority 0.81 standard deviations above the sample mean. Respondents in this cluster reported a slightly lower than average level of psychological job demands and fewer total work hours (46.79 vs. the sample mean of 48.46). (These psychological job demands and work hours were still high, hence our use of the term "lower" rather than "low" demands.)

Cluster 2 ( $n = 170$ ) captured a job environment with *high levels of job control* (with similar levels of skill discretion and decision authority as in cluster 1; see Table 1) and *high psychological job demands*. These employees' mean job demands was fully 1.25 of a standard deviation above the mean of the whole sample and they report longer work hours as well (mean of 54.16 per week, vs. the sample mean of 48.46 h). By contrast, cluster 3 ( $n = 202$ ) constituted a job environment with *high levels of job demands* (a score of 3.18 on psychological demands, compared to the sample mean of 2.98; and averaging 53.92 h of work per week, compared to sample mean of 48.46) and *low levels of job control* (scores of 2.73 on skill discretion and 2.54 on decision authority, compared to sample means of 2.96 and 2.95, respectively). Working in this type of job environment is what Karasek and Theorell (1990) theorized as conducive to high job strain and poor health outcomes. The final cluster 4 ( $n = 343$ ), captured an ecological environment characterized by both *lower demands and lower job control*. Employees in this ecology worked the fewest hours per week (an average of 43.50), had the lowest scores on psychological demands and skill discretion, and the second lowest score on decision authority. These four clusters mapped nicely onto Karasek's (1979) fourfold model of high and low job demands crossed with high and low job control.

Table 2 shows the means and standard deviations for home control and the frequency and percentages for the four categorical variables (home demands) characterizing the five home ecologies, listing the frequency and percent of employees in each life stage category in every cluster. Most employees in our sample ( $n = 339$ ) were located within a home ecology (cluster 4) characterized by marriage and reporting "average" home control (4.12). Seven in ten of employees in this *married* home environment were in their 20s and 30s and not raising children. Fewer than one in ten were empty nesters, that is, over age 40 and with adult children no longer at home. One in five (19.59%) was raising an older child—school-aged, adolescent, or young adult (average age of youngest child was 12). Note that this *married* home ecology, reflecting fewer home demands and average levels of home control, was not analogous to any of the quadrants theorized in the job demands-job control model.



The next largest cluster ( $n = 235$ ) characterized the home ecologies of respondents who were *singles* with no adult care-giving responsibilities. Only a few had a child at home. Not surprisingly, those in this singles ecology reported the highest levels of home control (4.63 compared to sample mean of 4.19). The singles home ecology of low home demands/high home control corresponded to the low job demands/high job control quadrant in Karasek and Theorell's (1990) model.

The remaining three clusters captured high home demands paired with relatively low home control; this situation parallels the job strain quadrant in Karasek and Theorell's (1990) model. These "home strain" respondents included those *living with preschoolers* (cluster 5,  $n = 156$ ), employees with *caregiving responsibilities* for infirm parents or other aging relatives. (cluster 2,  $n = 105$ ), and parents who were caring for a child with some type of *chronic health condition* (over 90% of cluster 3,  $n = 76$ ). We found no "high home demands/high home control" or "low home demands/low home control" environments comparable to those quadrants in Karasek and Theorell's model of work environments.

## 5.2. Predicting work-time control

Correlations indicated that employees' scores on control over work time was only moderately correlated with their scores on decision authority (.33) and skill discretion (.29), and even less correlated with home control (.09). Work-time control was thus related to but distinct from skill discretion on the job and decision authority (autonomy) at work or at home.

Multivariate regression models offered support for Hypothesis 1 that job ecologies predict control over work time. Compared to employees working in lower job demand/lower job control environments, employees in the lower job demands/high job control ecology were more likely to report high levels of control over work time, while those in the high demands/lower job control ecology were less likely to do so (see Model 1, Column 1, Table 3). These findings suggest that it is the *combination* of both job control and job demands that predict employees' control over their work time. Employees working in environments characterized by high job autonomy (in decision-making and skill use) and fewer psychological demands/working hours tended to have greater control over work-time.

Employees in their 30s, 40s, and 50s were also more apt to have more work time control than employees in their 20s, as were those with longer tenure. Both managers and technical/administrative employees tended to have more control over work time than those in professional jobs. Note that home ecologies did not predict work-time control.

## 5.3. Predicting dimensions of life-course fit

Also in support of hypothesis 1, job ecologies were the best predictors of two similar (and overlapping) measures of poor life-course fit: work-family conflict and negative work-family spillover. Employees working in job ecologies characterized by high psychological demands and long hours were especially apt to experience high levels of negative work-family spillover, regardless of whether they reported high or lower job control (see Model 1, Columns 2 and 3, Table 3).

Home demands mattered as well (supporting hypothesis 2), with employees engaged in some form of family care (those who cared for a preschooler or a child with a health condition, as well as those providing care to an infirm adult) most apt to report high work-family conflict and negative work-family spillover. Employees in high home demand/lower home control ecologies (raising preschoolers, having child with chronic health condition, caring for aging parents) were also less likely to report time adequacy, while parents of preschoolers reported less work schedule fit (See Model 1, Columns 5 and 7, Table 3).

Positive work-family spillover was positively predicted by high job control ecologies (regardless of job demands) and by high home demand/low home control ecologies. Working in high job demand/high job control ecologies and living in a high home demand/low home control ecology (raising preschooler) predicted higher and lower income adequacy scores, respectively (see Model 1, Columns 3 and 6, Table 3).

#### 5.4. Does work time control serve as a mediator?

We hypothesized that the effects of employees' control over their work time would directly affect life-course fit dimensions, as well as serving as a mechanism by which job ecologies affect employees' cognitions of various dimensions of life-course fit. Hypothesis 4 was supported by findings that work-time control predicted and partially mediated all dimensions of life-course fit, even net of job and home ecologies and background variables (see C, Fig. 1, and Model 2, Columns 2–7, Table 3). Specifically, control over work time was associated with lower levels of work-family conflict and negative work-family spillover, higher time adequacy, greater work schedule fit, and greater positive work-family spillover. The explained variance ( $R^2$ ) increased with the addition of the work-time control scale, with changes in  $R^2$  ranging from a low of .01 for positive work-family spillover to a high of .16 for work schedule fit. Sobel test statistics (not shown) confirmed that control over work time partially mediated the effects of job ecologies, age group, occupational category, and tenure on all dimensions of life-course fit. Contrary to hypothesis 3, we found no significant interactions between job and home ecologies for any of the fit outcomes (see B, Fig. 1).

## 6. Discussion

### 6.1. Key findings and practical significance

Our findings indicated that employees' assessment of various dimensions of life-course fit are shaped by *both* job ecologies (based on job demands and job control) and home ecologies (based on family demands and home control). Cluster analysis of data from this white-collar sample revealed four identifiable job ecologies reflecting the classic combinations of high/low job demands and high/low job control. These ecological clusters predicted (as hypothesized) dimensions of life-course fit. Employees in home ecologies with high "home strain" (i.e. the parents and caregivers with high family demands and little control over their unpaid care work) reported higher work-family conflict and negative work-family spillover as well as lower time and income adequacy. But contrary to hypothesis 3, we found that job ecologies and home ecologies did not moderate one another, predicting life-course fit in an additive, not interactive, fashion. Thus the home stressors operated above and beyond the stressors related to jobs, and job stressors predicted life-course fit outcomes for all workers, regardless of home demands and home control.

Control over work time also predicted life-course fit, net of job and home ecologies; employees with more work-time control were more apt to have lower work-family conflict and negative work-family spillover, higher positive work-family spill-over, greater time adequacy and income adequacy, and better work schedule fit. The mediation analysis demonstrated that control over work time partially mediated the effects of job ecologies on life-course fit.

Are these findings statistically but not practically significant? The reported partial Eta squared (available from authors), an effect size index describing the amount of variance in the dependent variables accounted for in the sample, suggested that they were practically significant as well. First, in the baseline models, job ecologies accounted for 19% of the variability in work-family conflict, 13% of the variability in work schedule fit, 9% of the variability in negative work-family spillover, 8% of the variability in perceived time adequacy, 3% of the variability in positive work-family spillover, and 1% of the variability in perceived

income adequacy. Including control over work time in the model only slightly reduced the effect sizes of job ecologies on fit measures. Home ecologies mattered as well, accounting for 10% of the variability in time adequacy, followed by 4% of the variability in work-family conflict. However, home ecologies only accounted for 1% to 2% of the variability in negative work-family spillover, positive work-family spillover, perceived income adequacy, and work schedule fit. These home ecology effect sizes on measures of life-course fit changed little after incorporating control over work time (See Model 2, Columns 2–7, Table 3). Control over work time itself had meaningful effect sizes, accounting for 17% of the variability in work schedule fit, 8% of the variability in work-family conflict, 3% of the variability in negative work-family spillover, 2% in the variability in perceived time adequacy, and 1% of the variability in positive work-family spillover and in perceived income adequacy.

These findings also have practical significance for managers and work-life advocates. Although the assumed focal point for work-family concerns and policies is often parents and especially mothers, the concept of life-course fit broadens the focus to include employees at all ages and life stages and men as well as women. Note that, although gender did predict measures of life-course fit (with women having less fit) net of job and home ecologies, additional analyses showed no moderating effects of gender in combination with either job or home ecologies. Our findings also demonstrated the importance of considering conditions at work as a system of demands, hours, skill discretion, and decision authority that relate to employees' cognitive assessments of life-course fit.

Practitioners (and some scholars) often assume that family demands disproportionately account for the stresses and strains experienced by contemporary employees. We showed that ecological niches of job demands and job control have a major impact on employees' assessments of different dimensions of life-course fit, regardless of their home environments. Human resource professionals and scholars concentrating exclusively on employees with high family demands miss addressing the strong effects of job demands, job control, and control over work time in fostering, sustaining or mitigating chronic strain. Our findings that demanding, long hour jobs predicted poor fit in terms of work-family conflict, negative work-family spillover, low time adequacy and poor work schedule fit, regardless of employees' job control or control over work time, underscores the import of extensive job obligations on employee life quality. The finding that having greater work-time control predicted better life-course fit on *every dimension* suggests promising ways to promote more supportive, healthy, and family-friendly working conditions (see also Kelly & Moen, 2007).

## 6.2. Limitations and directions for future research

The limitations of this study include the nature of the sample at the Best Buy corporate headquarters (young, white-collar, educated, Midwestern) and the fact that the analysis is cross-sectional. More research is needed on the range of job ecologies characterizing the environments of employees in different industries, occupations, or organizations before these findings can be generalized. Another limitation is the nature of the measures used. We do not, for example, have measures to capture the important distinctions now being drawn between work-family facilitation and engagement (Carlson et al., 2006; Grzywacz, Carlson, Kacmar, & Wayne, 2007). Further scholarship is required to develop and test the usefulness of a measure of home control as decision authority as well as a measure of home demands within the family system. It would also be fruitful to conceptualize and operationalize employees' control over their time at home.

Nonetheless, our evidence points to the value of (1) thinking about job and home as ecological niches that differ across and within workforces, as well as by age, organizational tenure and life stage, and (2) incorporating control over work time as a key job resource predictive of and mediating life quality. Future research could examine similar hypotheses in samples that have

more diversity by age, occupational status, race, and region, and by using longitudinal data to consider the dynamics of job and home circumstances producing changes in life-course fit.

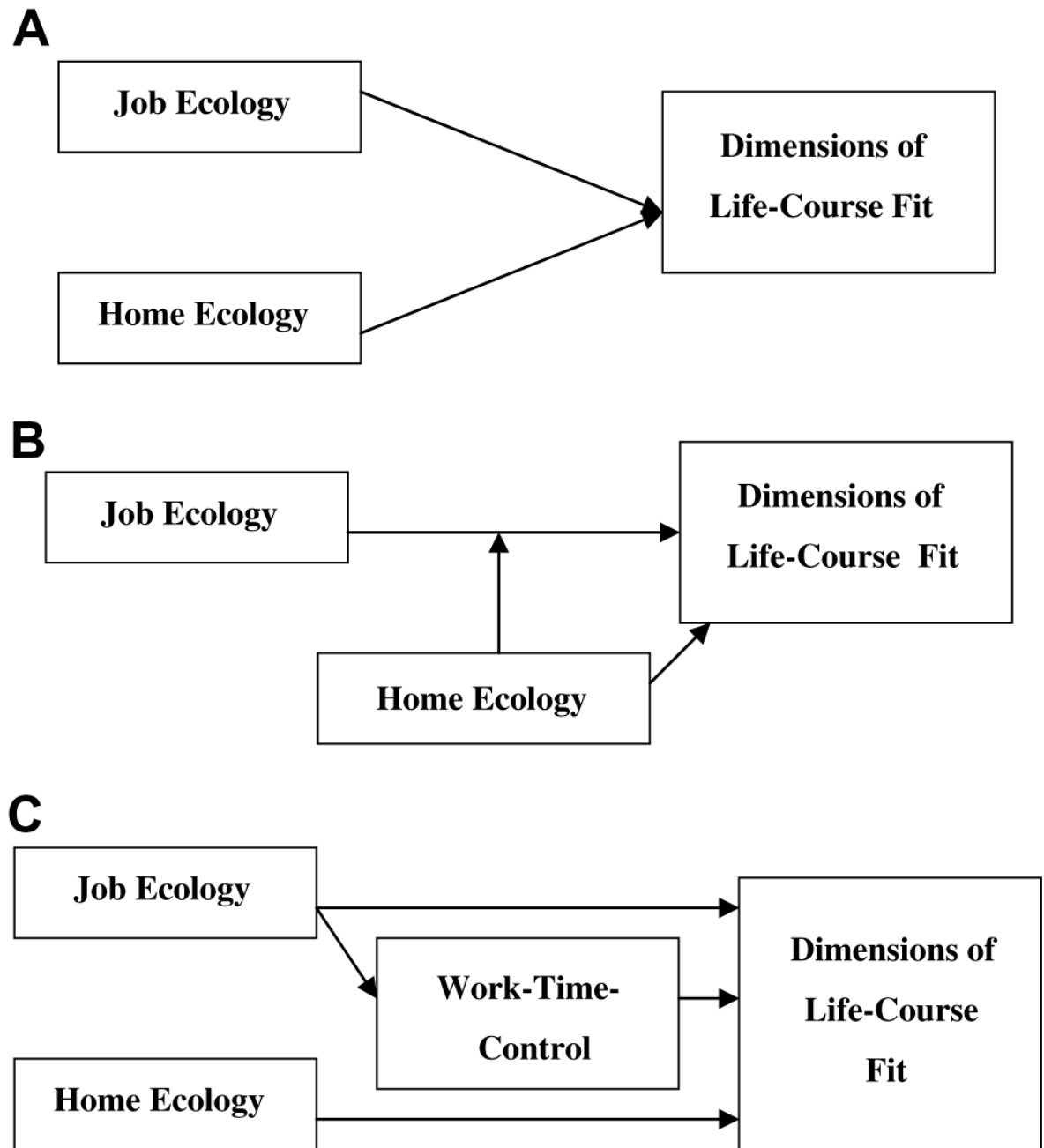
Our own research agenda (Moen, Kelly, & Chermack, 2008) includes an ongoing effort to evaluate an initiative designed to increase employees' control over the time and timing of their work and to assess whether increased work-time control actually results in changes in any or all the dimensions of life-course fit we included here, as well as employees' health. Conceptualizing work conditions as systems that can be changed (by, for example, increasing employees' control over their work time) could be an important area for human resource development. Investigating (in different workforces and different working environments) the constructs, linkages, and dynamics of life-course fit, home and job ecological systems, and control over work time could move both occupational health and work-family scholarship forward in exciting new directions.

## References

- Ala-Mursula L, Vahtera J, Kouvonen A, Väänänen A, Linna A, Pentti J, et al. Long hours in paid and domestic work and subsequent sickness absence: Does control over daily working hours matter? *Occupational and Environmental Medicine* 2006;63:608–616. [PubMed: 16728502]
- Barnett RC, Brennan RT. The relationship between job experiences and psychological distress: A structural equation approach. *Journal of Organizational Behavior* 1995;16:259–276.
- Barnett RC, Gareis KC, Brennan RT. Fit as a mediator of the relationship between work hours and burnout. *Journal of Occupational Health Psychology* 1999;4:307–317. [PubMed: 10526835]
- Belkic K, Landsbergis PA, Schnall PL, Baker D. Is job strain a major source of cardiovascular disease risk? *Scandinavian Journal of Work Environment Health* 2004;30(2):85–128.
- Butler AB, Grzywacz JG, Bass BL, Linney KD. Extending the demands-control model: A daily diary study of job characteristics, work-family conflict, and work-family facilitation. *Journal of Occupational and Organizational Psychology* 2005;78:155–169.
- Byron K. A meta-analytic review of work-family conflict and its antecedents. *Journal of Vocational Behavior* 2005;67:169–198.
- Carlson DS, Kacmar KM, Wayne JH, Grzywacz JG. Measuring the positive side of the work-family interface: Development and validation of a work-family enrichment scale. *Journal of Vocational Behavior* 2006;68:131–164.
- Clark SC. Work cultures and work/family balance. *Journal of Vocational Behavior* 2001;58:348–365.
- de Jonge J, Bosma H, Peter R, Siegrist J. Job strain, effort-reward imbalance and employee well-being: A large-scale cross-sectional study. *Social Science & Medicine* 2000;30:1317–1327. [PubMed: 10728851]
- Duxbury L, Higgins C, Lee C. Work-family conflict: A comparison by gender, family type, and perceived control. *Journal of Family Issues* 1994;15:449–466.
- Eby LT, Casper WJ, Lockwood A, Bordeaux C, Brinley A. Work and family research in IO/OB: Content analysis and review of the literature (1980–2002). *Journal of Vocational Behavior* 2005;66:124–197.
- Edwards JR, Rothbard NP. Work and family stress and well-being: An examination of person-environment fit in the work and family domains. *Organizational Behavior and Human Decision Processes* 1999;77:85–129. [PubMed: 10069942]
- Elsass PM, Veiga JF. Job mastery and job strain: A test of three models. *Journal of Occupational Health Psychology* 1997;2:195–211. [PubMed: 9552290]
- Evans O, Steptoe A. The contribution of gender-role orientation, work factors and home stressors to psychological well-being and sickness absence in male- and female-dominated occupational groups. *Social Science and Medicine* 2002;54:481–492. [PubMed: 11848269]
- Everitt, BS.; Landau, S.; Leese, M. Cluster analysis. Arnold; London: 2001.
- Fenwick R, Tausig M. Scheduling stress: Family and health outcomes of shift work and schedule control. *American Behavioral Scientist* 2001;44:1179–1198.

- Frone, MR. Work-family balance. In: Quick, JC.; Tetrick, LE., editors. *Handbook of occupational health psychology*. American Psychological Association; Washington, D.C.: 2003. p. 143-162.
- Goode WI. A theory of role strain. *American Sociological Review* 1960;25:483-496.
- Greenhaus J, Powell G. When work and family are allies: A theory of work-family enrichment. *The Academy of Management Reviews* 2006;31(1):72-92.
- Grzywacz JG, Bass BL. Work, family, and mental health: Testing different models of work-family fit. *Journal of Marriage and the Family* 2003;65:248-262.
- Grzywacz JG, Carlson DS, Kacmar KM, Wayne JH. A multi-level perspective on the synergies between work and family. *Journal of Occupational and Organizational Psychology* 2007;80(4):559-574.
- Grzywacz JG, Marks NF. Reconceptualizing the work-family interface: An ecological perspective on the correlates of positive and negative spillover between work and family. *Journal of Occupational Health Psychology* 2000;5:111-126. [PubMed: 10658890]
- Hammer LB, Cullen JC, Neal MB, Sinclair RR, Shafiro MV. The longitudinal effects of work-family conflict and positive spillover on depressive symptoms among dual-earner couples. *Journal of Occupational Health Psychology* 2005;10:138-154. [PubMed: 15826224]
- Hertz R. Working to place family at the center of life: Dual-earner and single-parent strategies. *Annals of the American Academy of Political and Social Sciences* 1999;562:16-31.
- Karasek RA. Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly* 1979;24:285-308.
- Karasek, RA.; Theorell, T. *Healthy work: Stress, productivity, and the reconstruction of working life*. Basic Books; New York: 1990.
- Kelly E, Moen P. Rethinking the clockwork of work: Why schedule control may pay off at home and at work. *Advances in Developing Human Resources* 2007;11:487-506.
- Kim, JE.; Moen, P.; Min, H. Well-being. In: Moen, P., editor. *It's about time: Couples and careers*. Cornell University Press; Ithaca: 2003. p. 122-132.
- Kossek, EE.; Lautsch, BA.; Eaton, SC. Flexibility enactment theory: Implications of flexibility type, control, and boundary management for work-family effectiveness. In: Kossek, EE.; Lambert, SJ., editors. *Work and life integration: Organizational, cultural and individual perspectives*. Lawrence Erlbaum Associates; Mahwah, NJ: 2005. p. 243-261.
- Lewin, K. *A dynamic theory of personality*. McGraw-Hill; New York: 1935.
- Marks SR. Multiple roles and role strain: Some notes on human energy, time and commitment. *American Sociological Review* 1977;42:921-936.
- Marshall NL, Sayer A, Barnett RC. The changing workforce, job stress and psychological distress. *Journal of Occupational Health Psychology* 1997;2:99-107. [PubMed: 9552283]
- Moen, P.; Chesley, N. Toxic job ecologies, lagging time convoys, and work-family conflict: Can families (re)gain control and life-course "fit"? In: Lero, DS.; Korabik, K.; Whitehead, DL., editors. *Handbook of work family integration: Theories, perspectives, and best practices*. Elsevier; New York: 2008. p. 95-118.
- Moen, P.; Elder, G., Jr.; Lüscher, K., editors. *Examining lives in context: Perspectives on the ecology of human development*. American Psychological Association; Washington, DC: 1995.
- Moen P, Kelly E, Chermack K, Booth A, Crouter AC. (in press) Learning from a natural experiment: Studying a corporate work time initiative. *Work-life policies that make a real difference for individuals, families, and organizations*. Urban Institute Press Washington, DC
- Moen P, Kelly E, Huang R. (in press) Fit inside the work-family black box: An ecology of the life-course, cycles of control reframing. *Journal of Occupational and Organizational Psychology*.
- Netemeyer RG, Boles JS, McMurrian R. Development and validation of work-family conflict and family-work conflict scales. *Journal of Applied Psychology* 1996;18:400-410.
- Pearlin, LI. The stress process revisited. In: Anehsensel, C.; Phelan, JC., editors. *Handbook of the sociology of mental health*. Kluwer Academic/Plenum; New York, NY: 1999. p. 395-415.
- Siebert SD. Toward a theory of role accumulation. *American Sociological Review* 1974;39:567-578.
- Siegrist J, Starke D, Chandola T, Godin T, Marmot M, Niedhammer I, et al. The measurement of effort-reward imbalance at work: European comparisons. *Social Science & Medicine* 2004;58:1483-1499. [PubMed: 14759692]

- Thomas LT, Ganster DC. Impact of family-supportive work variables on work-family conflict and strain: A control perspective. *Journal of Applied Psychology* 1995;80:6–15.
- Voydanoff P. Toward a conceptualization of perceived work-family fit and balance. A demands and resources approach. *Journal of Marriage and Family* 2005;67:822–836.
- Wayne JH, Grzywacz JG, Carlson DS, Kacmar KM. Work-family facilitation: A theoretical explanation and model of primary antecedents and consequences. *Human Resource Management Review* 2007;17(1):63–76.



**Fig. 1.**  
Three models linking job and home ecologies to life-course fit.

Table 1

Employees' job demands/job control ecologies

Clusters	N	%	Job demands		Job control		Decision authority (DCAUTS)	
			Psych. demands (PSYJDS)	Total work hrs (TOTHR)	Skill discretion (SKDISS)	Mean		SD
1 Lower job demands, high job control	(202)	22.00	2.86	46.79	<b>3.31</b>	0.26	<b>3.37</b>	0.32
2 High job demands, high job control	(170)	18.50	<b>3.62</b>	<b>54.16</b>	<b>3.38</b>	0.31	<b>3.35</b>	0.36
3 High job demands, lower job control	(202)	22.00	<b>3.18</b>	<b>53.92</b>	2.73	0.36	2.54	0.45
4 Lower job demands, lower job control	(343)	37.40	2.63	43.50	2.67	0.34	2.74	0.40
Combined	(917)	100.00	2.98	48.46	2.96	0.46	2.95	0.52

Note: High numbers are bolded; low numbers are italicized.



Table 2

home demand/home control ecologies

%	Home demands		Home Control												
	Freq.	%	Live with Spouse/r Partner	Child w Chronic Health Problem	No Child at Home Age <=40	Adult Care Provider	Preschool Child at Home	Child at Home 6-12	Child at Home 13-18	Child at Home 19+	No Child at Home Age >40	Freq.	%	Mean	
25.80	0	0.00	0	0	0.00	202	0	0.00	5	2.10	3	1.30	19	8.1	4.63
11.50	83	79.05	18	17.14	100.00	49	25	24.30	6	5.80	0	0.00	17	16.5	4.06
8.30	62	81.58	69	90.79	0	1	39	52.00	23	30.70	10	13.30	1	1.3	3.88
37.20	339	100.00	0	0.00	0.00	242	0	0.00	44	13.20	8	2.40	26	7.8	4.12
17.10	156	100.00	0	0.00	0.00	0	147	100.00	0	0.00	0	0.00	0	0	3.93
100.00	640	70.25	87	9.55	11.53	483	211	23.70	78	8.70	12	1.30	63	7.1	4.19

low numbers are italicized.

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**Table 3**  
Multivariate regression models predicting work time control and dimensions of life-course fit

Work time Control	Dimensions of life-course fit													
	Column 1 Work time Control	Column 2 W-F conflict		Column 3 Negative W-F spillover		Column 4 Positive W-F spillover		Column 5 Time adequacy		Column 6 Income adequacy		Column 7 W-F schedule fit		
Model 1	Model 1 baseline	Model 2 + work time control	Model 1 baseline	Model 2 + work time control	Model 1 baseline	Model 2 + work time control	Model 1 baseline	Model 2 + work time control	Model 1 baseline	Model 2 + work time control	Model 1 baseline	Model 2 + work time control	Model 1 baseline	Model 2 + work time control
Constant	2.96***	2.58***	3.53***	2.75***	3.15***	2.83***	2.56***	5.96***	4.70***	6.25***	5.09***	5.58***	3.55***	
<i>Home Ecology</i>														
Caregiver, average home control	-0.10	0.39***	0.36***	0.19*	0.17*	0.19*	0.20**	-0.99**	-0.94**	-0.08	-0.04	-0.22	-0.15	
Parents, kids health, lowest home control	0.07	0.40***	0.42***	0.19*	0.20*	0.22*	0.22*	-1.34***	-1.37***	-0.62*	-0.64*	-0.27†	-0.32*	
Married, average home control	-0.02	0.22**	0.22**	0.05	0.04	0.15**	0.15**	-0.49**	-0.48**	0.38*	.39*	-0.11	-0.10	
Parents, preschool, low home control	0.12	0.50***	0.54***	0.18**	0.19**	0.12†	0.11	-1.76***	-1.80***	0.07	0.04	-0.31*	-0.39**	
Singles, high home (reference)														
<i>Job Ecology</i>														
Low demands - high control	0.26***	.08	0.16*	0.04	0.08	0.20***	0.18**	.031	-0.09	0.28†	0.20	0.09	-0.09	
High demands - high control	-0.04	0.89***	0.88***	0.37***	0.37***	0.22**	0.22***	-1.12***	-1.10***	0.49**	0.53**	-0.76***	-0.73***	
High demands - low Control	-0.27***	0.80***	0.72***	0.42***	0.39***	-0.05	-0.03	-1.00***	-0.89***	-0.10	0.01	-1.02***	-0.83***	
Low d - low C (reference)														
<i>Gender</i>														
Men	0.00	-0.07	-0.07	-0.10*	-0.10*	-0.11**	-0.11**	0.22†	0.22†	0.26*	0.26*	0.18*	0.18*	
<i>Age Group</i>														
30-39	0.17**	0.02	0.07	-0.02	0.00	-0.17**	-0.19***	-0.14	-0.21	-0.02	-0.02	-0.04	-0.16†	
40-60	0.23**	0.00	0.07	-0.02	0.01	-0.19**	-0.21**	0.15	0.06	0.53**	0.46*	0.15	-0.01	

Work time Control	Dimensions of life-course fit											
	Column 2 W-F conflict		Column 3 Negative W-F spillover		Column 4 Positive W-F spillover		Column 5 Time adequacy		Column 6 Income adequacy		Column 7 W-F schedule fit	
	Model 1 baseline	Model 2 + work time control	Model 1 baseline	Model 2 + work time control	Model 1 baseline	Model 2 + work time control	Model 1 baseline	Model 2 + work time control	Model 1 baseline	Model 2 + work time control	Model 1 baseline	Model 2 + work time control
Column 1 Work time Control												
Model 1												
2009 (reference)												
<i>Job Category</i>												
Manager	0.31***	0.15*	-0.03	0.02	0.12*	0.09†	-0.02	-0.15	0.56***	0.47**	0.20*	-0.02
Technical/admin	0.15*	-0.16*	-0.16**	-0.14*	0.04	0.03	0.10	0.03	-0.38*	-0.43*	0.15	0.04
Professionals (reference)												
Telemark	0.02*	0.02*	.01	0.01	0.02**	.015	0.01	0.01	-.01	0.02	0.00	-0.01
<i>Work-Time Control</i>												
W-F	0.16 (0.15)	-0.32***	0.14 (0.12)	-0.14***	0.07 (0.06)	0.09***	0.20 (0.19)	0.43***	0.09 (0.08)	0.29***	0.15 (0.14)	0.69***
R <sup>2</sup>	0.28 (0.27)	0.34 (0.33)	0.16 (0.14)	0.16 (0.14)	0.08 (0.07)	0.08 (0.07)	0.23 (0.21)	0.23 (0.21)	0.11 (0.09)	0.11 (0.09)	0.30 (0.29)	0.30 (0.29)
R <sup>2</sup> change		0.01		0.02		0.01	0.02	0.02		0.01		0.16