



Making Up for Lost Time: When and How Time-Based Work-to-Family Conflict Motivates Parenting

Kimberly A. French¹ · Songqi Liu²

Received: 12 December 2023 / Revised: 3 September 2024 / Accepted: 16 September 2024 /

Published online: 26 September 2024

© The Author(s), under exclusive licence to Springer Nature Switzerland AG 2024

Abstract

Although previous research shows work-to-family conflict detracts from parenting time, extant literature offers little theoretical guidance or empirical data regarding when or why parents make up for time deficits created by work-to-family conflict. This study draws on action-regulation theory to examine when and under what conditions parents are motivated to compensate for time-based work-to-family conflict events. Two experimental vignette studies show that parents sequence their work-family responsibilities, and that sequencing is underpinned by motivation to compensate for family time deficit. On days when work-to-family conflict occurs, parents feel less obligated to interact with their adolescent children on that same day, but more obligated to interact with their adolescent children the following day, as compared to days with no work-to-family conflict. Further, we find evidence that future compensation efforts are largely explained by the motivating emotion of guilt. Study 2 findings further suggest that when partners contribute a higher portion of childcare labor, work-to-family conflict is less strongly tied to cognitive (perceptions of family goal attainment) and emotional (guilt) motivational states. Overall, our study reveals work-to-family conflict is but one experience in the motivational ebb and flow of managing goals to succeed at work and as a parent, and that couple-level norms can alter parent reactions to work-to-family conflict events.

Keywords Work-family conflict · Parent–child activities · Goal sequencing · Action-regulation · Guilt

Work is a major life domain that influences parenting practices (e.g., Barling & Mendelson, 1999; Belsky, 1984; Cho & Ciancetta, 2016). One of the most common

✉ Kimberly A. French
KFrench0429@gmail.com

¹ Department of Psychology, Colorado State University, Fort Collins, CO, USA

² J. Mack Robinson College of Business, Georgia State University, College of Business, 35 Broad St. NW, Atlanta, GA 30303, USA

experiences studied among working parents is work-to-family conflict (or work interference with family, WIF), which occurs when work makes it difficult to meet family obligations (Greenhaus & Beutell, 1985). Current theory and research largely approach the relationship between WIF and parenting behavior from a depletion perspective, such that parents whose work interferes more with their family tend to have less time and energy immediately available to engage in frequent and high quality parent–child interactions (e.g., Cho & Allen, 2012; French et al., 2016; Repetti & Wood, 1997).

The depletion lens places parents in a largely passive role, subject to WIF-induced resource drain and struggling to engage in parenting amidst the demands of work. Yet, parents also have the capacity and motivation to make up for lost time and energy with their children (Cho & Allen, 2012; French et al., 2024). Each day parents must engage with their children to provide routine care and build warm, supportive relationships – objectives most parents are committed to despite various obstacles. In this way, parenting activities can be considered daily family performance goals that working parents strive to meet in an effort towards fulfilling the super-ordinate goal of “being a good parent” (Hirschi et al., 2019, p. 157). By focusing almost exclusively on how work depletes parenting, extant literature has all but overlooked parenting agency and motivation. This oversight leaves critical gaps in understanding when or why parents may want to compensate for parenting time and energy deficits stemming from work.

Drawing from a joint action-regulation perspective (Hirschi et al., 2019), this study seeks to understand compensation mechanisms that explain how parent work experiences spillover to influence their next-day parenting interactions with adolescent children on a day-to-day basis. We define compensation as a psychological process of recognizing and making up for thwarted goal pursuits (e.g., due to lack of progress) by dedicating increased time and attention towards that goal in the future (Carver & Scheier, 1982; Hirschi et al., 2019).¹ We also explore compensation as a joint process that is subject to alternative caregiver availability and division of labor norms within the family. Given the importance of parent-adolescent interactions for adolescent social, emotional, and career development (Soenens et al., 2019; Steiner et al., 2023), parents’ struggles to manage this important life domain due to decreasing parental self-efficacy during their children’s adolescence (Glatz & Buchanan, 2015), and the relative dearth of work-family research on parents of adolescents as compared to younger children (Matias & Recharte, 2020), we test our ideas within a sample of parents with adolescent children.

¹ Compensation is also a strategy in the Selection, Optimization, and Compensation (SOC) life-management theory (Baltes & Heydens-Gahir, 2003; Freund & Baltes, 2002). Our definition of compensation is rooted in action-regulation theory (Carver & Scheier, 1982; Hirschi et al., 2019). Compensation, both in the context of SOC and action-regulation, occurs when there is a loss, and describes how individuals adapt or recuperate from such a loss. In SOC, compensation is tied to “means” (i.e., resource) loss, and compensation includes a broad array of strategies for earning back “means” (e.g., getting a hearing aid if hearing is lost, developing new resources of skills) to goal attainment. In our action-regulation based definition of compensation, the loss refers specifically to thwarted goal progress, and compensation is more narrowly focused on increasing time/energy to goal pursuit to make up for deficits in progress.

This study extends the work-to-parenting spillover literature in several ways. First, we conceptualize parenting as a goal-directed action-regulation process, based on which we posit the relationship between WIF and obligation to engage in parent-adolescent activities on a day-to-day basis (Carver & Scheier, 1982; Frese & Zapf, 1994; Hirschi et al., 2019). In doing so, we show WIF can motivate *future* intentions to engage in parent-adolescent interactions (see also, Cunningham, 2011). Our study highlights compensation as a critical mechanism that explains why people sequence work and family goal pursuits (Hirschi et al., 2019). We position WIF as just one performance episode in the continuous management of work-parenting interface, rather than an end state to simply avoid. Finally, our motivational perspective highlights that the effect of WIF on parenting differs depending on the time frame (current vs. future parenting behavior), a factor largely ignored by previous research (Mitchell & James, 2001; Shipp & Cole, 2015).

Second, we take a family-level perspective on work-to-parenting spillover by testing daily partner availability and caregiving norms as modifiers of the relationship between WIF and felt obligation to engage in parenting interactions. Previous studies largely examined a single parent or parent–child dyad (e.g., Cho & Allen, 2012; Cooklin et al., 2016; MacEwen & Barling, 1991; Roeters et al., 2010, 2012; Stewart & Barling, 1996). Extant studies that examined two parents only explored additive effects (e.g., French et al., 2016; Roeters et al., 2009; Vieira et al., 2016a, 2016b; Vieira et al., 2016a, 2016b) and/or compared findings across mothers and fathers (e.g., Almeida & McDonald, 1998; Barling et al., 1998; Bass et al., 2009; Cinamon et al., 2007; Matias et al., 2017b). Our study expands this research by incorporating family contextual factors that *modify* WIF’s motivating effects. In doing so, we provide a more complete and ecologically valid picture of the day-to-day implications of WIF in two-parent households.

Finally, our study uses an experimental vignette design to isolate day-to-day relationships between WIF and parenting behavior. This approach complements previous observational field studies on work-to-parenting spillover by striking a balance between improving internal validity (via experimental manipulations) and external validity (via high-fidelity scenarios presented to real working parents). Our within-person approach also allows us to rule out potential alternative explanations (e.g., individual differences in caretaking preferences, extraneous daily factors), which might obfuscate interpretation of findings in observational studies. Furthermore, our research design is particularly strong in its ability to test and expand theory by illuminating cognitive and affective mechanisms that explain when and why parents feel the need to compensate for WIF (Aguinis & Bradley, 2014; Powell & Greenhaus, 2006).

Theory and Hypothesis Development

An Action-Regulation Perspective on the Work-Parenting Interface

According to the depletion perspective, meeting demands in one domain requires resource consumption, which then reduces resources available to meet demands in

the alternative domain (Edwards & Rothbard, 2000; ten Brummelhuis & Bakker, 2012). Applied to parenting, this rationale suggests that when parents' time, energy, and affect at home are depleted by work, they have less time, energy, and affective resources to engage in frequent and high quality interactions with their children (Cho & Ciancetta, 2016; Greenhaus & Beutell, 1985; Repetti et al., 2009). In support, the bulk of extant empirical evidence suggests parents with greater levels of WIF spend less time with their children and engage in poorer quality interactions (for reviews, see Cho & Ciancetta, 2016; Reimann et al., 2022), and that daily work demands are associated with less parent–child time and lower quality parenting behavior within the same day (e.g., Bass et al., 2009; Gassman-Pines, 2011; Repetti, 1994; Repetti & Wood, 1997).

While clearly generative, this perspective on the work-parenting interface ignores the possibility that parents might adapt to, or make up for, lost resources particularly when considering a longer time frame (Edwards, 1992; Hobfoll et al., 2018). For example, resource depletion in the short-term may motivate strategies or tactics that protect or replenish resources in the future (Hobfoll et al., 2018; Kreiner et al., 2009). Additionally, division of labor research shows that within two-parent households, parents use strategies to jointly juggle work and family demands on a day-to-day basis (e.g., Medved, 2004; Radcliffe & Cassell, 2014; Shockley et al., 2021).

To address these theoretical shortcomings, we adopt an action-regulation perspective on the work-parenting interface (Hirschi et al., 2019). Action-regulation theory is derived from principles of self-regulation. Self-regulation theories collectively posit that individuals strive towards superordinate goals, which manifest as striving towards lower-order task goals on a daily basis (Austin & Vancouver, 1996; Frese & Zapf, 1994; Johnson et al., 2006). For example, parents may have the superordinate goal of “being a good parent” which manifests as meeting daily demands, or goals, to spend time in routine (e.g., cooking, chores) and interactive (e.g., leisure, homework) activities with their children (e.g., Cho & Allen, 2012; Daly, 1996; Dryžaitė & Tereškinas, 2022; Milkie et al., 2019; Rutigliano et al., 2023).

Like the depletion perspective, action-regulation theory posits resources (e.g., time, energy) must be expended to meet goals. However, when resources are scarce, action-regulation theory posits that individuals are agentic, using goal-related strategies to overcome barriers or replenish resources (Frese & Zapf, 1994; Hirschi et al., 2019). This idea is similar to work on boundary or identity management, which posits individuals use tactics to juggle multiple, simultaneous demands (Dai et al., 2024; Haun et al., 2022; Kreiner et al., 2009). When resources are scarce and cannot be readily replenished, individuals will likely sequence goals, such that goals in one domain are attended to at the moment while efforts toward goals in another domain are paused (or “shielded”) and attended to at a later time (Carver & Scheier, 1982; Hirschi et al., 2019). Kreiner et al. (2009) similarly outline “invoking triage” and “controlling work time” as a boundary management tactics in which individuals plan and prioritize their time to address urgent or important demands, with the intention of returning to other demands at a later point in time. Thus, in contrast to the depletion or resource drain logic, action-regulation theory posits that individuals who experience more WIF will actively continue to work towards their superordinate goal (“being a good parent”) by consciously planning to engage in

more parent-adolescent activities later (i.e., sequential accomplishment of different goals).²

Our study is particularly interested in the idea of sequencing as an action-regulation strategy often enacted within couples (French et al., 2024; Hirschi et al., 2019). We expand on sequencing by suggesting that parents not only address parenting goals at a later time, but that there is a psychological, motivational drive to *compensate*, or make up for, a perceived family goal deficit (cf. Carver & Scheier, 1982; Johnson et al., 2006). Compensation is theoretically novel in that it brings the issue of timing into the foreground. Time is a finite resource which is expended when completing daily tasks to meet work and family goals (Edwards & Rothbard, 2000; ten Brummelhuis & Bakker, 2012). Time deficits are therefore commonly experienced, where parents feel they are not spending “enough” time to meet their definition of a “good parent” (Daly, 1996; Harvey & Mukhopadhyay, 2007; Milkie et al., 2004, 2019). When time at work creates this time deficit in parenting, we argue parents are motivated to compensate by planning to allocate lost time towards family *in the future* (i.e., sequencing). Thus, we argue compensation is the psychological, motivational process that underlies and explains the use of sequencing over time to meet work and family goals. Such allocation would be difficult or improbable in the short-term, implying that sequencing as a strategy used to compensate for time deficits necessarily occur across time.

WIF and Parent-Adolescent Interactions

WIF is one of the most commonly studied work-family phenomena to-date (Allen & French, 2023). As presumed by its name, WIF is directional in nature such that work makes it difficult to meet family demands (Greenhaus & Beutell, 1985). The present study focuses on time-based WIF, which occurs when time spent at work makes it difficult to spend time with the family (Greenhaus & Beutell, 1985; Hetrick et al., 2023). Time-based WIF is most appropriate for our interest in sequencing and compensation because time can be strategically allocated and pooled for future use (Hirschi et al., 2019). Parents think about and gauge their parenting success by how much time is spent with their children (Daly, 1996, 2001; Milkie et al., 2019). Thus, parents may be particularly attentive to time as an indicator of goal achievement, and motivated to strategically allocate time sequentially to meet goals in the long-run, especially when time is scarce.

When time-based WIF occurs on a given day, by definition, time is allocated away from family and towards meeting current work goals. This time depletion at home reduces availability to interact with adolescents and meet daily parenting goals (e.g., Aarntzen et al., 2019; Cho & Allen, 2012; Cho & Ciancetta, 2016; Edwards & Rothbard, 2000; French et al., 2016; Gassman-Pines, 2011). Because spent time cannot be readily replenished, action-regulation theory argues that individuals are likely

² Action-regulation theory also posits individuals may totally disengage from a goal (Hirschi et al., 2019), but we suspect this is unlikely when it comes to the superordinate goal of “being a good parent” unless under extreme and rare circumstances.

to engage in sequencing, such that parenting goals are consciously, temporarily set aside (Hirschi et al., 2019). We focus on felt obligation to engage with adolescents as our outcome of interest. The action regulation theoretical framework positions daily parent-adolescent activities as necessary to meet superordinate parenting goals (Hirschi et al., 2019). In other words, parents may feel parent-adolescent activities are a daily obligation, the fulfilment of which helps to meet their parenting goal.

In support, several studies suggest parents feel an obligation or sense of duty to engage in activities with their children (e.g., Daly, 1996; Milkie et al., 2019; Rutigliano et al., 2023). This felt obligation towards parent-adolescent activities occurs despite evidence that parent–child activities can be stressful and tiring (Daly, 2001; Meier et al., 2016), including among parents of adolescents (Roeters & Gracia, 2016). Moreover, the societal expectation of intensive parenting for both mothers and fathers creates a social and cultural obligation to engage with children (Faircloth, 2014; Milkie et al., 2019). Such an obligation, however, will have to be temporarily set aside when work takes precedence on some days. That is, within the same day, we expect that parents use sequencing action-regulation strategies when time-based WIF occurs, such that time-based WIF reduces parents' felt obligation to engage with their adolescent children.

Hypothesis 1: WIF (day t) reduces parent-adolescent activity obligation within the same day (day t).

Applying action-regulation theory to work and parenting, when time spent at work reduces time spent in the family, individuals might perceive that their parenting obligations are unmet for the day. To make up for this deficit, parents may plan to devote increased time to parenting the following day, effectively sequencing their work and family responsibilities (Carver & Scheier, 1982; Hirschi et al., 2019). While others have written about the motivating potential of WIF (Cunningham, 2011), empirical evidence is scant. Some research suggests WIF may be motivating for parent–child activities or intentions to engage with children, especially among parents who feel guilty (Aarntzen et al., 2019; Cho & Allen, 2012). A recent daily study found fathers' WIF was positively associated with next day engagement in routine parent-adolescent activities, but only when mothers were working; this pattern was not supported for mothers' WIF (French et al., 2024). In sum, we posit parents who experience time-based WIF on a given day feel increased obligation to spend time with adolescent children the next day.

Hypothesis 2: WIF (day t) increases parent-adolescent activity obligation the next day (day $t+1$).

Caregiving Partners' Role in Day-to-Day Parenting

We next consider how the family context affects day-to-day compensation in response to WIF (Belsky, 1984; Bronfenbrenner, 1986). Action-regulation theory posits that goals may be shared with others (Hirschi et al., 2019). Within

two-parent households, caregiving goals are shared among partners (Shockley et al., 2021), such that both parents are responsible for meeting daily caregiving goals. Two-parent households are also able to pool and jointly allocate time toward parenting (Cluley & Hecht, 2020; Harvey & Mukhopadhyay, 2007).

When partners “fill in” for one another, they help to reduce parenting goal discrepancies by ensuring that, as a family unit, daily parenting goals are met. In this way, partners have the potential to reduce pressure to make up for lost parent-adolescent time (Bryant & Zick, 1996; Davis et al., 2006; French et al., 2024). This partnered compensation might happen on a day-to-day basis that varies with partners’ availability (e.g., daily decisions, Radcliffe & Cassell, 2014). Alternatively, partners may have certain norm for division of labor within the family, such that one parent regularly takes more responsibility for childrearing (e.g., anchoring decisions, Radcliffe & Cassell, 2014). In either case, when caregiving partners are available and expected to take on more daily childcare demands, it may alleviate pressure to compensate for their partner. Consequently, WIF will be less motivating, weakening positive relationships between WIF and felt obligation to engage in caregiving behaviors the following day. Alternatively, a lack of partner availability or high share of the burden for meeting childcare responsibilities can create more urgency or felt obligation to compensate for lost parenting time to ensure parenting goals are met (Hirschi et al., 2019).

Qualitative and quantitative work confirms that parents negotiate and share caregiving responsibilities, and that these negotiations are subject to couple members’ availability and couple-level norms (Cluley & Hecht, 2020; Livingston & Whan Ryu, 2020; Medved, 2004; Radcliffe & Cassell, 2014). Studies also find that as one partner’s work demands or WIF increase, their partners report greater time and quality of parenting activities (Cinamon et al., 2007; Costigan et al., 2003; Matias et al., 2017a; Roeters et al., 2009; Vieira et al., 2016a, 2016b; Vieira et al., 2016a, 2016b). Our rationale directly replicates and extends the findings of French et al. (2024), whose results show father WIF is positively related to father-adolescent routine activities on the following day only when mothers are working on that following day. Notably, their study found no direct link between mother WIF and next day mother-adolescent activities, and father daily work status was not a moderator for this link. Thus, overall, there is theoretical and empirical evidence to suggest a parenting partner’s daily availability and couple-level caregiving norms can modify the extent that WIF induces feelings of obligation to make up for lost time with adolescents the next day.

Hypothesis 3: Partners’ work status the next day (day $t+1$) modifies the positive relationship between WIF (day t) and parent-adolescent activity obligation the next day (day $t+1$), such that the relationship is weaker when partners are not working compared to when they are working the next day (day $t+1$).

Hypothesis 4: Partners’ portion of childcare modifies the positive relationship between WIF (day t) and parent-adolescent activity obligation the next day (day $t+1$), such that the relationship weakens as partners take on more childcare responsibilities.

Study 1 and Study 2 Overview

To explore the compensation mechanism underlying work-to-parenting spillover, we conducted two experimental vignette studies. We used vignette experimental methodology due to its ability to establish causality, while holding confounds that occur in everyday life constant via random assignment (Aguinis & Bradley, 2014). The goal of Study 1 is to test Hypotheses 1–4. Study 2 constructively replicates and expands on Study 1's test of Hypotheses 2–4 by explicitly examining goal striving mechanisms and by tweaking the methodology to increase statistical power and precision. All code, output, and supplementary materials are available on the study OSF website: https://osf.io/s952n/?view_only=734ff9cc08c7449b9ef33208d3f7effb.

Study 1

Study 1 Method

Participants

Participants were recruited from Prolific, an online panel service commonly used in academic research. Eligible individuals resided in the U.S. or Canada, worked at least 30 h per week, had at least one biological adolescent child born between 2003 and 2008, and were married to a partner in a heterosexual relationship. Out of 404 individuals who clicked on the survey link, 304 met the eligibility criteria and consented to participate. In addition, participants had to correctly respond to one bogus item and correctly respond to a manipulation check (“Was your spouse working tomorrow?”) for each vignette scenario to ensure attention. Duplicate IP addresses and locations were removed (56 participants removed). A final total of 248 participants were eligible and passed quality controls ($N=992$ within-person observations). In the final sample, 57.66% identified as men, 42.34% identified as women, and the average age was 42.21 years old. Participants worked in their current organization for an average of 9.17 years and reported an average of 42.21 paid work hours per week. Participants' partners worked an average of 36.94 h per week. Most participants (85.02%) and their partners (75.71%) worked standard daytime hours with a wide variety of job titles. The average number of children was two, and the average age of the first and second children were 16.01 and 13.45, respectively.

Procedure

Participants were first provided informed consent; participants indicated consent by continuing forward and completing the study.³ The vignette study design was informed by recommended best practices for experimental vignettes (Aguinis & Bradley, 2014) and using online participant pools for research (Aguinis et al., 2021;

³ Study 1 and Study 2 were approved by Georgia Tech's IRB under Protocol H21333.

Cheung et al., 2017). Vignettes described four situations where WIF did or did not occur and partners were or were not working the following day for a 2×2 within-person design. We then asked about parent future attitudes towards caregiving behavior to directly test proposed action-regulation mechanisms (Table 1). We used a within-person design to control for individual differences and to maximize statistical power. Each participant received the four vignettes in which WIF occurred/did not occur today and partners were/were not working tomorrow for a 2×2 within-person design (see Table 1). Vignette order was counterbalanced, creating 24 cells ($4 \times 3 \times 2 \times 1$) in total.

All measures were completed via an online Qualtrics survey that took approximately 10–20 min to complete, and participants were compensated \$5 for their participation. Participants received informed consent, followed by the four counterbalanced vignettes. Following each vignette, participants were asked the dependent measures (obligation to engage in parent-adolescent activities today and tomorrow), as well as manipulation checks to ensure participants read and understood the vignette conditions. Participants then completed several demographic questions and questions about their work and family lives generally.

Measures

See Table 1 for measure items.

Parent-Adolescent Activities Obligation (Day t and Day $t+1$) Following each scenario participants responded to the following study-developed question, “In this scenario, to what extent do you feel obligated to engage in the following behaviors with your adolescent child(ren) today?” (i.e., on day t). Participants were asked the same question regarding obligation “tomorrow” (i.e., on day $t+1$). For both today and tomorrow, participants indicated obligation to engage in (1) routine activities and in (2) interactive activities on a five-point scale ranging from 1 = *not at all* to 5 = *a lot*. Items were study-developed based on activities in Cho and Allen’s (2012) scale to create a concise measure. The routine and interactive items were averaged to create two parent-adolescent activities composites, one referencing “today” (day t , $\omega_{\text{within}}=0.89$, $\omega_{\text{between}}=0.91$) and one referencing “tomorrow” (day $t+1$, $\omega_{\text{within}}=0.91$, $\omega_{\text{between}}=0.91$).⁴

Partner Portion of Childcare Participants responded to the study-developed item, “Currently, what percentage of childcare tasks does your spouse actually perform,” on a scale ranging from 0 to 100.

Manipulation Checks Two manipulation checks were used to determine participants read and understood each vignette. One assessed perceived WIF levels, “To what extent did work make it difficult to meet your family demands today?” (i.e., on day

⁴ For information on omega as a multilevel reliability estimate, see Geldhof et al. (2014).

Table 1 Sample Vignettes and Measures

Variable	Item	Anchor
Sample vignette: WIF does not occur, partner not working	Today, you had to manage a particularly difficult coworker, who ended making more work for you than anticipated. Fortunately, you were able to get your work completed on time, and you made it home for dinner and spent the evening together with your family as planned. You were able to spend the plenty of time in the evening with your children, as usual. Tomorrow your spouse has the day off of work	NA
Sample vignette: WIF occurs, partner working	Today, your team decided to schedule a meeting during the time you would normally spend with your children after school. You had to attend the meeting, and you missed school pick up and after school time normally spent helping with homework and making dinner. By the time you stopped working, you had very little time left in the evening with your children compared to normal evenings. Tomorrow your spouse has a full and busy workday	NA
Parent-adolescent obligation to engage in routine activities tomorrow (day t + 1) ^{1,2}	In this scenario, to what extent do you feel obligated to engage in the following behaviors with your adolescent child(ren) today? Talk while driving or over text, do housework or shopping together, attend an afterschool activity my adolescent participates in, watch TV together	1 = <i>not at all</i> , 5 = <i>a lot</i>
Parent-adolescent obligation to engage in interactive activities tomorrow (day t + 1) ^{1,2}	In this scenario, to what extent do you feel obligated to engage in the following behaviors with your adolescent child(ren) tomorrow? Discuss achievements and concerns, help with homework, exercise, go on an outing, play games, do something outside together	1 = <i>not at all</i> , 5 = <i>a lot</i>
Family goal attainment (day t) ³	Today, I met my goal to take care of my family	1 = <i>strongly disagree</i> , 5 = <i>strongly agree</i>
Guilt (day t) ³	Today, I felt guilty	1 = <i>strongly disagree</i> , 5 = <i>strongly agree</i>
Manipulation check: WIF (day t)	To what extent did work make it difficult to meet your family demands today?	1 = <i>not at all</i> , 5 = <i>a lot</i>
Manipulation check: Partner work status (day t + 1)	Tomorrow, does your spouse work?	0 = <i>No</i> , 1 = <i>Yes</i>
Partner portion of childcare	Currently, what percentage of childcare tasks does your spouse actually perform?	0%–100%

¹Study 1 also assessed parent-adolescent obligation to engage in routine and interactive activities today

²In Study 2, we used a two item measure in which participants rated the extent they (1) “should exert more effort in” and (2) “need to spend more time in” parent-adolescent routine and interactive activities. ³Included in Study 2

t) on a scale ranging from 1 = *not at all* to 5 = *a lot*. A second item assessed partner work status tomorrow, “Tomorrow, does your spouse work?” Participants responded 0 = *no* or 1 = *yes*.

Materials

To create vignettes, we drew from previous work-family vignette studies in terms of design features and vignette content (Cinamon & Rich, 2002; Greenhaus & Powell, 2003; River et al., 2019). We also reviewed daily diary data on negative work events (Bono et al., 2013; Liu et al., 2009) and qualitative and quantitative data on WIF episodes (French & Allen, 2020; Shockley & Allen, 2013, 2015) to identify common negative work events and WIF scenarios. Our final vignettes resemble several instances of real qualitative reports of work-family conflicts (e.g., grant writing team failed and had to pick up the slack, had to stay late and finish high workload, had too much work and pushed back picking up child from daycare). Full vignettes can be found in our online OSF materials.

Study 1 Results

Preliminary Analyses

Data were analyzed using R (R Core Team, 2022) – specifically, the lme4 package (Bates et al., 2015). Within and between level correlations can be found in Table 2. Before conducting hypothesis tests, we used a 2×2 (WIF×partner work status) within-subjects ANOVA to determine whether participants rated WIF as higher when reading vignettes where WIF occurred compared to vignettes where WIF did not occur. There was a main effect of WIF condition ($F(1,909)=1268.40$, $p<0.001$), such that vignettes where WIF occurred were rated as more interfering (WIF occurred/partner working $Mean=3.93$, $SD=1.05$; WIF occurred/partner not working $Mean=3.83$, $SD=0.99$) than vignettes where WIF did not occur (WIF did not occur/partner working $Mean=2.06$, $SD=0.99$; WIF did not occur/partner not working $Mean=1.94$, $SD=0.86$). All participants correctly responded to the partner working status manipulation check to be included in the sample. A table of means and standard deviations by condition for all within-subjects variables is in Table 3 (see also illustrative boxplots in Fig. 1).

Hypothesis Testing

We tested Hypotheses 1–3 by conducting two 2×2 (WIF×partner work status) within-subjects ANOVAs. Hypothesis 1 proposed WIF (day t) reduces obligation to engage in parent-adolescent activities on the same day (day t). On days with WIF, participants reported lower obligation to engage in parent-adolescent activities on the same day ($F(1,741)=76.32$, $p<.001$) compared to days without WIF. There was no main effect of partner work status ($F(1,741)=1.13$, $p=.29$) or the interaction term ($F(1, 741)=0.33$, $p=.57$).

Table 2 Study 1 Correlations

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Parent-adolescent activities obligation (day t)	3.25	0.86		.82**	.21*	-.14*	.10	-.07	-.06
2. Parent-adolescent activities obligation (day t + 1)	3.43	0.87	.05		.28**	-.06	.01	-.05	-.04
3. Participant-rated WIF (day t)	2.94	0.65	-.27**	.29**		.01	-.05	-.09	-.14*
4. Partner portion of childcare	43.44	19.93					-.59**	.22**	-.01
5. Parent gender	1.42	0.50						-.20**	-.02
6. Parent age	45.52	6.73							.35**
7. Adolescent age	16.01	2.99							

* $p < .05$. ** $p < .01$. Correlations below the diagonal are computed using person mean-centered variables to estimate within-person associations ($N = 992$). Correlations above the diagonal are computed using person means to estimate between-person associations ($N = 248$). *WIF* work-to-family conflict. Gender coded as 1 = Man, 2 = Woman

Table 3 Study 1 (N = 248) and Study 2 (N = 543) Means and Standard Deviations by Condition using the Full Sample

Variable	High WIF/ Partner Working		High WIF/ Partner Not Working		Low WIF/ Partner Working		Low WIF/ Partner Not Working	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Study 1								
Parent-adolescent activities obligation (day t)	3.08	1.08	3.00	1.10	3.48	1.08	3.46	1.10
Parent-adolescent activities obligation (day t + 1)	3.72	1.05	3.56	1.11	3.38	1.06	3.05	1.11
Participant-rated WIF (day t)	3.93	1.05	3.83	0.99	2.06	0.99	1.94	0.86
Study 2								
Parent-adolescent activities obligation (day t + 1)	3.25	1.05	3.14	1.03	2.94	1.07	2.87	1.07
Family goal attainment (day t)	2.71	1.11	2.72	1.18	4.20	0.74	4.22	0.72
Guilt (day t)	3.45	1.21	3.38	1.19	2.26	1.04	2.23	1.10
Participant-rated WIF (day t)	3.50	1.26	3.42	1.29	1.93	0.99	1.88	1.01

WIF Work-to-family conflict

Hypothesis 3 posited that the relationship between WIF (day t) and obligation to engage in parent-adolescent activities the next day (day t + 1) is moderated by partner working status the next day (day t + 1). There was a significant main effect of both WIF ($F(1,741)=78.35, p<.001$) and partner work status ($F(1,741)=27.41, p<.001$). Supporting Hypothesis 2, parents felt more obligated to engage in parent-adolescent activities the next day (day t + 1) when WIF (day t) occurred compared to when WIF (day t) did not occur. Parents also felt more obligated to engage in parent-adolescent activities partners were working the next day (day t + 1) compared to when they were not. The interaction term, however, was only marginally significant ($F(1,741)=3.91, p=.07$); therefore, Hypothesis 3 was not supported.

Hypothesis 4 posited the relationship between WIF (day t) and obligation to engage in parent-adolescent activities the next day (day t + 1) is modified by partner portion of childcare. We ran a mixed-effects linear model in which partner portion of childcare (at the between-person level) modified the within-person relationship between WIF (day t) and obligation to engage in parent-adolescent activities the next day (day t + 1) (Winter, 2013). There was a significant main effect of WIF (*unstandardized estimate* = -0.41, *SE* = 0.12, $p<.001$) again consistent with Hypothesis 2. However, there was not a main effect of partner portion of childcare (*unstandardized estimate* = -0.003, *SE* = 0.003, $p=.38$), nor was there a significant interaction term (*unstandardized estimate* = -0.000, *SE* = 0.002, $p=.92$). Hypothesis 4 was not supported.

Supplementary Analysis: Parent Gender

Because caregiving and its meaning is gendered (Blair-Loy, 2005; Shockley & Shen, 2016), we also explored whether the relationship between WIF occurrence and next

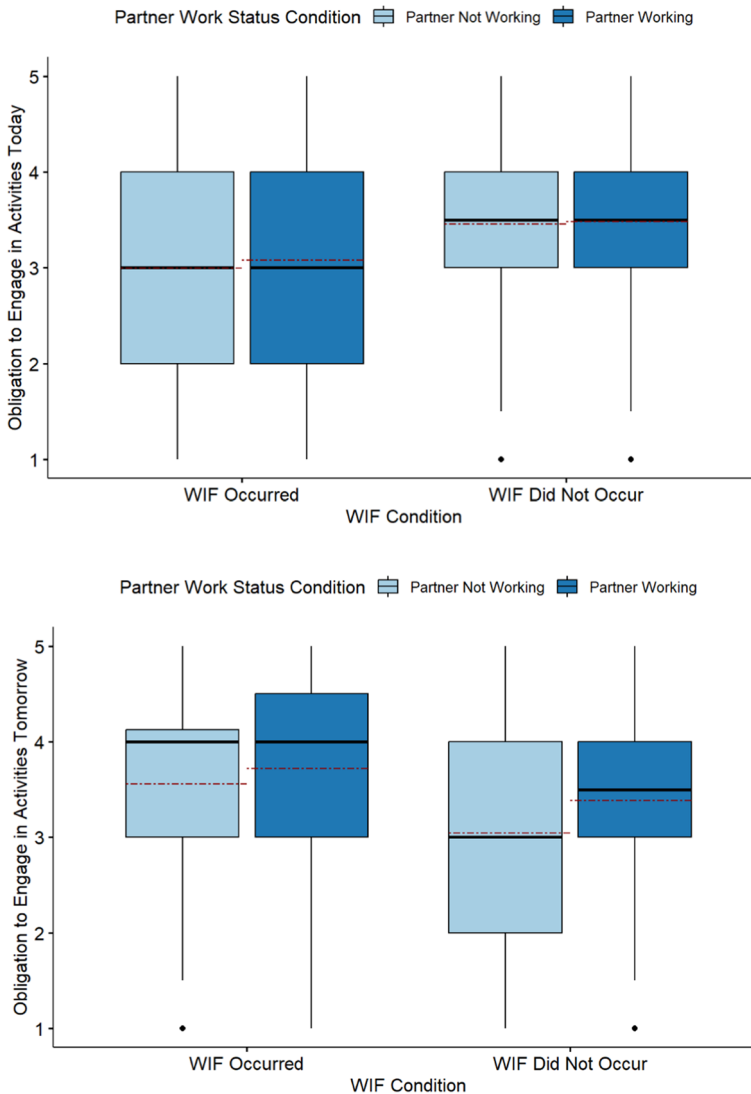


Fig. 1 Boxplots for parent-adolescent activity obligation on day t (today) and day $t + 1$ (tomorrow) across the four conditions in Study 1. Note. Red, dot-dashed lines represent group means

day obligation to engage in parent-adolescent activities was modified by parent gender. We ran a mixed-effects linear model in which parent gender (at the between-person level) modified the within-person relationship between WIF (day t) and obligation to engage in parent-adolescent activities the next day (day $t + 1$) (Winter, 2013). There was not a main effect of parent gender (*unstandardized estimate* = -0.038, *SE* = 0.122, $p = .76$), nor was there a significant interaction term (*unstandardized estimate* = 0.098, *SE* = 0.099, $p = .32$).

Study 1 Discussion

Overall, our findings show parents intend to compensate for WIF by dedicating lost family time to parent-adolescent activities in the future. A critical finding is that timing matters for sequencing and compensation. Specifically, parents only felt obligated to compensate for lost family time when thinking about the next day. Within the same day, parents felt *less* obligated to interact with their adolescents on days when WIF occurred compared to days when WIF did not occur. This overall pattern lends support to the idea that parents are motivated to compensate for lost family time, but that this motivational process takes place over time, underpinning the action-regulation strategy of sequencing (Carver & Scheier, 1982; Hirschi et al., 2019). We found no support for our hypotheses that partners alter intentions to compensate based on their daily availability (work status) or couple parenting norms (i.e., portion of childcare performed). This finding lies in direct contrast to theoretical (Belsky, 1984; Bronfenbrenner, 1986; Hirschi et al., 2019) and empirical work (e.g., Cluley & Hecht, 2020; Radcliffe & Cassell, 2014; Shockley et al., 2021) that suggests couples negotiate and juggle childcare responsibilities. Although the means across experimental groups suggest trends consistent with our hypotheses, the statistical tests failed to reach significance.

Lack of support for the conditional effects may have been due to an under-powered study, as limited by the size of the eligible sample pool in Prolific. A post-hoc power analysis using the estimates from our study suggested 571 participants were needed to yield an 80% power rate (Guo et al., 2013). Additionally, our study did not test goal-striving mechanisms implied in our action-regulation rationale. Action-regulation theory positions parent-adolescent activities as daily goals that couples strive to meet, even in the face of WIF (Hirschi et al., 2019). A test of such mechanisms is particularly important given that our exploration of action-regulation and compensation as the underpinning motivational process is relatively novel.

Study 2

In Study 2, replicate and expand the compensation findings from Study 1 in two important ways. First, we explicitly test motivational compensation mechanisms to show more clearly that sequencing is driven by a goal-directed process whereby parents strive to interact with their children on a day-to-day basis, even in the face of barriers due to WIF (Hirschi et al., 2019). To our knowledge, no prior research has explicitly tested the idea that parent-adolescent activities are evaluated as daily family goals.

We argue that compensation occurs when goals are unmet. A necessary part of this process is goal monitoring, where people evaluate and detect possible discrepancies between their goal state and their current state (Austin & Vancouver, 1996; Carver & Scheier, 1982). This discrepancy is cognitive in nature, in that individuals evaluate and recognize goal failure, which motivates future intentions (Carver & Scheier, 1982; Johnson et al., 2006). In the context of parenting, parents have daily

goals to engage with their adolescent children in an effort to be a good parent and fulfill their family goals. These goals are thwarted when work consumes time that would otherwise be spent with adolescents on a given day. Thus, based on theoretical ideas underlying action-regulation (Frese & Zapf, 1994; Hirschi et al., 2019), perceptions of family goal attainment (or lack thereof) ought to explain why WIF is associated with increased future obligation to engage in parent-adolescent activities.

Hypothesis 5: WIF (day t) indirectly increases parent-adolescent activity obligation the next day (day $t+1$) via lower family goal attainment (day t).

Additionally, goal failure tends to generate negative emotions (Austin & Vancouver, 1996; Grandey, 2008; Johnson et al., 2006). Guilt is an emotion identified as an outcome of WIF (Judge et al., 2006; Livingston & Judge, 2008), particularly among parents (Aarntzen et al., 2019; Cho & Allen, 2012; Guendouzi, 2006). Guilt occurs when individuals negatively evaluate their own behaviors, taking responsibility for a perceived failure to meet norms or goals (Baumeister et al., 1994; Tangney, 1990). Guilt has well-documented motivational qualities, such that individuals are driven to reduce feelings of guilt by repairing their “wrong doing” (Amodio et al., 2007; Baumeister et al., 1994; Tangney, 1990). In the context of family goals, this means parents who fail to spend typical time with family due to work might feel guilty (Borelli et al., 2017; Chen & Cheng, 2023; Korabik, 2015; Livingston & Judge, 2008; Martínez et al., 2011), motivating future intentions to compensate by spending time with adolescents the next day. Specific to parent-adolescent activities, studies find some support for guilt as a motivator, such that WIF is more weakly associated with parent–child activities at the between-person level for parents higher on trait-level guilt (Cho & Allen, 2012). Additionally, parents’ work-family guilt on a given day predicted intentions to spend more time and energy with their children the following day (Aarntzen et al., 2019).

Hypothesis 6: WIF (day t) indirectly increases parent-adolescent activity obligation the next day (day $t+1$) via increased guilt (day t).

We again posit parenting partners’ daily availability and couple-level caregiving norms modify the extent that WIF ultimately results in feeling obligated to engage with children the next day. There is some question as to where in the compensation process this moderation takes place. A first-stage moderation would occur if next day partner availability and having a partner who regularly performs a high portion of childcare alleviate overall family responsibility and thus the extent that WIF occurrence is perceived as an impediment to family goals and a violation of parenting norms. Accordingly, the relationship between WIF and cognitive (family goal attainment) and affective (guilt) motivational states would be weaker. A second-stage moderation would occur if available partners alleviate the need to act on motivational states (perceptions that family goals were not attained and guilt), because the partner is able to step in and meet these goals. As a result, the relationship between cognitive (family goal attainment) and affective (guilt) motivational states and obligation to engage with adolescents would be

weaker when partners are not working the next day and when partners regularly provide a high portion of caregiving labor. Because we do not have strong theoretical or empirical guidance that points us towards either option, we explore both possibilities.

Hypothesis 7: Partner work status (day $t+1$) modifies the positive indirect relationship between WIF (day t) and parents' felt obligation to engage with children the next day (day $t+1$), such that the relationship weakens when partners are not working compared to when partners are working the next day (day $t+1$).

Hypothesis 8: Couple division of labor modifies the positive indirect relationship between WIF (day t) and parents' felt obligation to engage with children the next day (day $t+1$), such that the relationship weakens as partners take on more family labor responsibilities.

The second major way we extend Study 1 is by altering design to conceptually replicate Study 1 with increased power. To focus participants' attention on the main day of interest and reduce fatigue, Study 2 assessed only next day anticipated attitudes and behavior. We shifted the focus to "today" rather than "tomorrow" as day $t+1$, to increase the immediacy of the decision. Study 2 also expanded our obligation to engage in parent-adolescent activities measure to include items that tap into self-imposed effort expectations (should spend more effort) and family need for caregiving time (need to spend more time). Finally, we attempted to recruit a larger sample (at least 240 men, 240 women) to increase estimate precision and statistical power.

Study 2 Method

Participants

Participants were recruited through an online panel provided by Qualtrics. We used the same eligibility criteria as Study 1. Out of 4,404 individuals who clicked on the survey link, 1,713 met the eligibility criteria and consented to participate. To ensure sufficient attention, participants had to correctly respond to two bogus items, a language check ("Which of the following words is most related to "moody?"), a culture check ("Name the punctuation mark at the end of this sentence."), and a manipulation check ("Was your spouse working tomorrow?") for each vignette scenario. Participants from duplicate locations and IP addresses were removed, and we screened responses to the question "Please briefly describe your job responsibilities" to omit nonsensical responses. Based on these quality control criteria, we removed 1,170 participants. The final sample included 543 participants ($N=2,172$ within-person observations). In the final sample, 48.43% identified as men, 51.57% identified as women, and the average age was 44.91. Participants worked in their current organization for an average of 11.30 years, and reported an average of 42.26 paid work hours per week. Partners worked an average of 38.60 h per week. Most participants (89.03%) and their partners (73.98%) worked standard daytime hours with a wide variety of job titles. The average number of children was two, and the average age of the first and second children were 15.68 and 12.60, respectively.

Procedure

The experimental vignette design was identical to that of Study 1 (see Table 1). Qualtrics determined payment for participation, which approximated minimum wage.

Measures

See Table 1 for measure items. *Partner portion of childcare* and *manipulation check* measures were identical to those used in Study 1.

Parent-Adolescent Activity Obligation (Day $t+1$) Following each scenario, participants responded to the study-developed questions, “In this scenario, to what extent do you feel you need to spend more time on the following behaviors with your adolescent child(ren) today?” and “In this scenario, to what extent do you feel you should exert more effort in the following behaviors with your adolescent child(ren) today?” For each question, participants indicated obligation to engage in (1) routine and (2) interactive activities on a scale ranging from 1 = *not at all* to 5 = *a lot*. All four items were composited ($\omega_{\text{within}}=0.89$, $\omega_{\text{between}}=0.99$).

Family Goal Attainment (Day t) Following each scenario, participants responded to the following study-developed question, “Yesterday, I met my goal to take care of my family” (day t). Participants responded on a scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*.

Guilt (Day t) Following each scenario, participants responded to the following study-developed question, “Yesterday, I felt guilty” (day t). Participants responded on a scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*.

Materials

Vignettes were identical to those used in Study 1 except that the vignettes were reworded such that WIF (or lack thereof) occurred yesterday (day t), and partners worked (or did not work) today (day $t+1$). Participants were only asked to rate their anticipated behaviors and attitudes today (day $t+1$). We made this change in an effort to make the manipulation and day of interest more salient and focused as well as to reduce participant fatigue.

Study 2 Results

Preliminary Analyses

Means and standard deviations by condition for all within-subjects variables are in Table 3 and within and between level correlations are in Table 4. Before testing the hypotheses, we used a 2×2 (WIF $\times$ partner work status) within-subjects ANOVA to determine whether participants rated vignettes in which WIF occurred

Table 4 Study 2 Correlations

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Parent-adolescent activities obligation (day t+1)	3.05	0.08		.01	.22**	.24**	.07	.02	-.01
2. Family goal attainment (day t)	3.46	0.58	-.27**		-.54**	-.53**	.13**	-.11**	-.04
3. Guilt (day t)	2.83	0.82	.29**	-.71**		.53**	-.20**	.28**	-.11**
4. Participant-rated WIF (day t)	2.68	0.79	.28**	-.73**	.66**		-.08	.09*	.02
5. Partner portion of childcare	45.30	22.07						-.47**	.08
6. Parent gender	1.52	0.50							-.16**
7. Parent age	44.91	7.12							

* $p < .05$. ** $p < .01$. Correlations below the diagonal are computed using mean-centered variables to estimate within-person associations ($N=2,172$). Correlations above the diagonal are computed using variable means to estimate between-person associations ($N=543$). WIF work-to-family conflict. Gender coded as 1 = Man, 2 = Woman

as higher in WIF than vignettes in which WIF did not occur. There was a main effect of WIF condition ($F(1,1626)=1422.52$, $p < .001$), such that vignettes in which WIF occurred were rated as more interfering (WIF occurred/partner working $Mean=3.50$, $SD=1.26$; WIF occurred/partner not working $Mean=3.42$, $SD=1.29$) than vignettes in which WIF did not occur (WIF did not occur/partner working $Mean=1.93$, $SD=1.01$; WIF did not occur/partner not working $Mean=1.88$, $SD=0.99$). All participants correctly responded to the partner working status manipulation check in order to be included in the sample.

Hypothesis Testing

We used multilevel structural equation modeling (1-1-1). Because our hypotheses are exclusively at the within level, we ran an unconfated model in which all variables were group-mean centered and modeled only at the within level (Preacher et al., 2010).⁵ Analyses were conducted in Mplus Version 8.6 using the Bayes estimator (Muthén & Muthén, 2017). Slopes were specified as random. We tested all proposed mediators and moderators at the same time, to maintain parsimony in our approach and because we expect the mediators and moderators to operate simultaneously in real life. We computed the within-person interaction terms by multiplying our within-person predictor and moderator variables and adding interaction terms as predictors of their appropriate endogenous variables. We tested cross-level

⁵ A latent moderation approach using Bayesian estimation may produce the highest quality estimates (Asparouhov & Muthén, 2021; Kim & Hong, 2020). Moreover, latent centering may produce more accurate estimates than manual centering used for our unconfated model. We therefore also ran our model using latent centering and latent interactions (Asparouhov & Muthén, 2021; Kim & Hong, 2020; Preacher et al., 2016). Because WIF and partner work status conditions only varied within-person, they were specified as within variables. To aid convergence and to resolve a computational redundancy error,

interaction by regressing the random slopes on the between-person moderator. When interaction effects were statistically significant, we probed significance by graphing the simple effects at high (one standard deviation above the mean) and low (one standard deviation below the mean) values of the moderator (Aiken & West, 1991). Unstandardized direct effects are shown in Table 5.

Hypothesis 5 and 6 proposed WIF (day t) increases obligation to engage in parent-adolescent activities the next day (day $t+1$) through lower perceptions of met family goals (day t) and guilt (day t). The indirect relationship between WIF (day t) and obligation to engage in parent-adolescent activities (day $t+1$) through family goal attainment (day t) was not statistically significant (*unstandardized indirect effect*=0.10, *posterior SD*=0.06, 95% *CI*=[-0.01, 0.21]), although the relationship through guilt (day t) was statistically significant (*unstandardized indirect effect*=0.14, *posterior SD*=0.04, 95% *CI*=[0.06, 0.24]). Thus, Hypothesis 5 was not supported, while Hypothesis 6 was supported.

Hypothesis 7 proposed partner work status the next day (day $t+1$) moderates the indirect relationship between WIF (day t) and parent-adolescent activity obligation (day $t+1$) via family goal attainment (day t) and guilt (day t), such that the relationships are weaker when partners do not work the next day (day $t+1$), compared to when they work. Regarding the first stage interactions, the interaction between WIF (day t) and partner work status (day $t+1$) was not associated with family goal attainment (day t) (*unstandardized estimate*=0.02, *posterior SD*=0.06, 95% *CI*=[-0.10, 0.14]) or guilt (day t) (*unstandardized estimate*=0.04, *posterior SD*=0.06, 95% *CI*=[-0.09, 0.26]). Similarly regarding the second stage interactions, the interaction between family goal attainment (day t) and partner work status (day $t+1$) and the interaction between guilt (day t) and partner work status (day $t+1$) was not associated with parent-adolescent activity obligation (family goal attainment *unstandardized estimate*=0.02, *posterior SD*=0.05, 95% *CI*=[-0.08, 0.12]; guilt *unstandardized estimate*=0.01, *posterior SD*=0.06, 95% *CI*=[-0.12, 0.11]). Therefore, Hypothesis 7 was not supported.

Hypothesis 8 proposed partner portion of childcare buffers the indirect relationship between WIF (day t) and parent-adolescent activity obligation (day $t+1$) via family goal attainment (day t) and guilt (day t), such that the relationships are weaker as partner portion of childcare increases. Regarding the first stage cross-level interactions, partner portion of childcare predicted the random slope between WIF (day t) and family goal attainment (day t) (*unstandardized estimate*=0.003,

Footnote 5 (continued)

we tested latent interactions across four models. Our results replicated significant effects in the main analysis, and two additional hypotheses were supported. Hypothesis 5 was supported, as the indirect effect from WIF (day t) to obligation to engage in parent-child activities the next day (day $t+1$) through family goal attainment (day t) was significant. Additionally, Hypothesis 8 was more strongly supported, as the second-stage cross-level interactions were statistically significant such that the association between both family goal attainment (day t) and guilt (day t) and parent-adolescent activity obligation (day $t+1$) become weaker as partner portion of childcare increases. There was also statistically significant evidence of moderated mediation for both mediators, such that the indirect association between WIF (day t) and parent-adolescent activity obligation via both family goal attainment and guilt becomes weaker as partner portion of childcare increases.

Table 5 Study 2 (N = 543) Multilevel Moderated Mediation Unstandardized Direct Effect Estimates When Entering Partner Work Status as a Within-Person Moderator

Predictors	Family goal attainment (day t)		Guilt (day t)		Parent-adolescent activity obligation (day t + 1)	
	Estimate	Posterior SD	Estimate	Posterior SD	Estimate	Posterior SD
Within level						
WIF (day t)	-1.51*	0.04	1.15*	0.04	0.00	0.05
Family goal attainment (day t)					-0.07	0.04
Guilt (day t)					0.12*	0.04
Partner work status (day t + 1)	-0.02	0.04	0.03	0.05	0.07*	0.03
WIF (day t) × partner work status (day t + 1)	0.02	0.06	0.04	0.06		
Family goal attainment (day t) × partner work status (day t + 1)					0.02	0.05
Guilt (day t) × partner work status (day t + 1)					0.01	0.06
Within level residual variance	0.56*	0.02	0.62*	0.02	0.40*	0.02
Between level						
Partner portion of childcare					0.00	0.00
WIF (day t) × partner portion of childcare ^a	0.003*	0.001	-0.003*	0.001		
Family goal attainment (day t) × partner portion of childcare ^a					0.00	0.00
Guilt (day t) × partner portion of childcare ^a					-0.00	0.00
Between level residual variance					0.55*	0.04

* $p < .05$, *SD* Standard deviation. ^aEstimates shown are partner portion of childcare predicting the random slope between the relevant variables, consistent with the random coefficients approach to cross-level moderation

posterior $SD=0.001$, 95% $CI=[0.001, 0.005]$) and guilt (day t) (*unstandardized estimate* = -0.003, *posterior SD* = 0.001, 95% $CI=[-0.005, -0.001]$). Conditional direct effects show the negative association between WIF (day t) and family goal attainment (day t) becomes weaker as partner portion of childcare increases (1 SD above the mean *estimate* = -1.31, *posterior SD* = 0.08, 95% $CI=[-1.46, -1.13]$; 1 SD below the mean *estimate* = -1.44, *posterior SD* = 0.05, 95% $CI=[-1.52, -1.34]$; *difference between estimates* = -0.13, 95% $CI=[-0.22, -0.04]$). However, the indirect effect through family goal attainment was similar at high (*indirect effect* = 0.08, *posterior SD* = 0.05, 95% $CI=[-0.01, 0.18]$) and low (*indirect effect* = 0.09, *posterior SD* = 0.05, 95% $CI=[-0.01, 0.20]$) levels of the moderator (*difference between estimates* = 0.01, 95% $CI=[-0.01, 0.02]$). Additionally, the positive association between WIF (day t) and guilt (day t) becomes weaker as partner portion of childcare increases (1 SD above the mean *estimate* = 0.95, *posterior SD* = 0.11, 95% $CI=[0.77, 1.13]$; 1 SD below the mean *estimate* = 1.08, *posterior SD* = 0.06, 95% $CI=[0.98, 1.18]$, *difference between estimates* = 0.13, 95% $CI=[0.02, 0.23]$). The indirect effect through guilt was weaker at high (*indirect effect* = 0.12, *posterior SD* = 0.04, 95% $CI=[0.05, 0.20]$) and low (*indirect effect* = 0.13, *posterior SD* = 0.04, 95% $CI=[0.06, 0.23]$) levels of the moderator (*difference between estimates* = 0.02, 95% $CI=[0.002, 0.04]$). Neither of the second-stage cross-level interactions were statistically significant. Thus, Hypothesis 8 received partial support, as the first stage of the mediation through both family goal attainment and guilt was weakened as partner portion of childcare increased, but only the indirect effect through guilt was modified.

Supplementary Analysis: Parent Gender

As in Study 1, we explore parent gender as a modifier for the proposed mediation in Study 2. We ran a multilevel structural equation model (1-1-1) entering only parent gender as an uncentered level two moderator of each path in our mediation. Analytical procedures followed those of our main hypothesis test.⁶ One of the four parent gender moderation effects emerged as statistically significant. Specifically, parent gender moderated the association between WIF (day t) and family goal attainment (day t). For both mothers and fathers, there was a statistically significant negative association between WIF (day t) and family goal attainment (day t) (mother *unstandardized estimate* = -1.45, *posterior SD* = 0.04, 95% $CI=[-1.53, -1.37]$; father *unstandardized estimate* = -1.55, *posterior SD* = 0.04, 95% $CI=[-1.63, -1.47]$), but this relationship was stronger for fathers compared to mothers (*difference between estimates* = -0.10, *posterior SD* = 0.05, 95% $CI=[-0.19, -0.004]$). Additionally, the positive indirect relationship from WIF (day t) to obligation to engage in parent-adolescent activities (day $t+1$) through family goal attainment (day t) was significantly moderated by parent gender. For both mothers and fathers, this indirect

⁶ We also replicated the supplementary analyses from Study 1, such that gender did not moderate the direct relationship between WIF (day t) and obligation to engage in parent-adolescent activities (day $t+1$) (*unstandardized estimate* = -0.12, $SE=0.07$, $p=.07$).

effect was positive and significant (mother *unstandardized estimate* = 0.30, *posterior SD* = 0.12, 95% *CI* = [0.07, 0.53]; father *unstandardized estimate* = 0.32, *posterior SD* = 0.13, 95% *CI* = [0.07, 0.57]), but the indirect effect was stronger for fathers compared to mothers (*difference between estimates* = 0.02, *posterior SD* = 0.01, 95% *CI* = [0.000, 0.05]⁷). Notably, the magnitude of this difference is small. Overall, our findings suggest the path via family goal attainment is slightly stronger for fathers than mothers due to fathers more strongly seeing WIF as detrimental to family goal attainment; there were no gender differences for the indirect path via guilt.

Study 2 Discussion

Study 2 sought to replicate and extend Study 1 by (1) directly testing cognitive (family goal attainment) and affective (guilt) goal striving mechanisms and by (2) adjusting study design and increasing sample size to improve statistical power and precision. Consistent with Study 1, we find unequivocal support for the compensation mechanism, such that parents feel more obligated to spend time and effort with their adolescent children the day after they have experienced a time-based WIF. This compensation effect was explained primarily by feelings of guilt. On days when WIF occurs, parents emotionally perceive that they were not able to meet their responsibilities, which motivates future compensation. Although WIF decreased perceptions of family goal attainment, family goal attainment was only supported as a mediator in supplementary analyses which did not account for all modifying factors.

Consistent with Study 1, we found no evidence that partner working status the next day changed either motivational cognitive and affective reactions to WIF or the relationships between motivational cognitive and affective states and felt obligation to engage with adolescents. We did, however, find strong evidence that typical partner childcare contributions modified the compensation process as hypothesized. When partners contribute a higher portion of childcare labor, WIF is less likely to engender feelings that family goals are unmet or feelings of guilt. Supplementary analyses also suggested these cognitive and affective motivational states may be less likely to produce a felt obligation to engage with children the next day when partners provide more childcare. Combined, our findings suggest compensation is a couple-level work-family strategy that is enacted in the context of the caregiving unit.

General Discussion

This study sought to explore why and when parents engage in sequencing as an action-regulation strategy used by parents to manage their day-to-day work and parenting demands (Hirschi et al., 2019). Across two experimental vignette studies we find that when time-based WIF occurs on a given day, parents feel obligated

⁷ This confidence interval appears to include zero but is noted as statistically significant on our Mplus output. We assume this is due to rounding and if moving out another decimal place, the interval does not include zero.

to spend increased time with their adolescent children the following day. We also found this obligation was motivated by feelings of guilt, with less evidence that it is motivated by cognitive evaluations of family goal achievement. We explored the role of daily partner availability and partner typical contributions to childcare as family context modifiers that weaken the felt need to compensate for WIF. Although not supported in Study 1, there is strong evidence in Study 2 that high typical partner contributions to childcare can reduce the motivational qualities of WIF.

Theoretical Implications

Our study supports and extends action-regulation theory and our understanding of sequencing as an action-regulation strategy enacted by parents in several important ways. We first show timing is critical for sequencing. Within-day work-to-family conflict is associated with *reduced* obligation to engage with children, consistent with typical depletion rationale which suggests time used by one domain becomes unavailable and will therefore reduce time in an alternative domain (Edwards & Rothbard, 2000; Krannitz et al., 2015). Across days, parents have more time to strategically plan and allocate, and our results suggest they feel *increased* obligation to reallocate that time towards the family after WIF occurs. This conclusion aligns with those found in French et al.'s (2024) daily diary field sample of adolescent fathers. Explicitly considering the role of time in compensation efforts helps to advance knowledge of the work-parenting interface by showing work and family performance episodes are linked across time, rather than simply documenting the within-person fluctuations of work and family performance.

We extend knowledge of sequencing by exploring compensation as the underlying motivational mechanism that drives sequencing behavior. We derive compensation from the self-regulation perspective, which suggests we cognitively assess goal progress and are motivated to make up for goal deficits by changing goal-striving behavior in the future (Carver & Scheier, 1982; Johnson et al., 2006). Our data specifically suggest that when work creates a time debt at home, parents emotionally respond with guilt, which motivates felt obligation to make up for that debt the following day (see also, Aarntzen et al., 2019). In addition, in line with compensation as a cognitive process, we found WIF triggers cognitive (i.e., family goal attainment evaluation) mechanisms, although family goal attainment was only associated with obligation to engage with adolescents after removing other moderators in our model. In comparing the patterns for guilt and family goal attainment, we conclude that while parents cognitively and emotionally recognize WIF as creating a time deficit with their children, the emotional pull of guilt may be a stronger, or more consistent, motivator than cognitively recognizing that family goals are unmet.

Our study highlights work-family conflict as one part of a motivational process that ebbs and flows across time as individuals juggle their responsibilities (Cunningham, 2011; French et al., 2024). Framing WIF as a motivating experience is theoretically novel, as dominant perspectives position WIF exclusively as a negative stressor or strain experience (Allen & French, 2023; Cunningham, 2011). Our

motivational framing and focus on compensation shows why and when individuals might cope or adapt their circumstance to prevent resource loss spirals (Edwards, 1992; Hobfoll et al., 2018; Matthews et al., 2016). This motivational and agentic perspective also points to convergence across action-regulation and boundary management literatures. Although one study finds no empirical connection between integration-segmentation strategies (Hirschi et al., 2022), other strategies used to build and maintain work and family boundaries (identity allocation, invoking triage, managing time; Dai et al., 2024; Kreiner et al., 2009) appear to closely overlap with the ideas of sequencing and compensation. Approaching boundary management from a motivation framing like the one used in this study may help to unite these currently disparate literatures and better understand when and why people use certain boundary management tactics.

Furthermore, we show compensation efforts that drive sequencing are contingent on caregiving norms within the couple. Specifically, Study 2 suggested caregiving partners can decrease the motivational qualities of WIF when they typically take on more caregiving responsibilities. Our studies further suggest anchoring family routines affected the felt need to compensate for WIF, whereas day-to-day partner work status did not. Note that French et al. (2024) also investigated daily caregiving availability as a modifier and found support among fathers (they did not explore caregiving norms). It may be that our vignette scenario is not sensitive enough to day-to-day variations in partner availability, such that individuals are overly optimistic about their ability to give care regardless of their partners' availability. Caregiving norms on the other hand may be more salient, or powerful signals that alter the felt need to compensate even within a hypothetical scenario. Overall, we show day-to-day work-family management is a complex family-level task in which partners may modify one another's parenting efforts. This perspective expands on previous work that largely focuses on parents' additive effects of work-family conflict on parent-child outcomes (e.g., Roeters et al., 2009; Vieira et al., 2016a, 2016b). We also contribute theoretical and empirical specificity to action regulation theory (Hirschi et al., 2019) by explicating how shared family labor norms alter sequencing efforts.

Finally, our supplementary analyses explored parent gender as a moderator to see if the motivational qualities of WIF may be equally felt by mothers and fathers. Largely, these analyses showed little differential effects across genders. In Study 2, we find fathers more strongly felt family goals were unmet when WIF occurred compared to mothers, and therefore also felt more strongly obligated to engage with adolescents the following day. This finding is in some ways surprising, given that women often take on the majority of household labor and feel internalized and externalized pressure to be the primary caregiver for their children (Blair-Loy, 2005; Shockley & Shen, 2016; Shockley et al., 2017). However, ample research suggest fathers' work may be particularly likely to crossover and affect parenting because fathers' caregiving is less scripted, more flexible, more noticeable, and less segmented from work than mothers' caregiving (e.g., Almeida et al., 1999; French et al., 2016, 2024; Roeters & van Houdt, 2019; Shockley et al., 2017). It might also be that WIF is more normative or expected for mothers as compared to fathers.

Our work echoes this idea that fathers' motivations to engage in caregiving is more strongly linked to WIF than mothers' motivations.

Practical Implications

Our findings highlight working parents' sense of childcare time deficits and their tendency to compensate for lost family time stem from episodes of WIF. Because perceptions of having too little time with their children can put a heavy toll on working parents' wellbeing (Milkie et al., 2019), workplaces can employ family-friendly work design and supports in an effort to minimize time-based WIF (e.g., Barber & Santuzzi, 2015; French & Shockley, 2020; Kossek, 2006). Organizations and supervisors could also help parents to use the sequencing strategy by scheduling work in predictable ebbs and flows, such that parents can better plan for making up for lost family time in the future. Control over working time and space is another means by which workers can arrange their work so they are able to make up for lost family time and alleviate associated guilt. Such supports may be particularly important for those carrying the majority of caregiving labor in their families.

Our findings also suggest that partners play an important role in alleviating feelings of guilt. For couples in which one partner is feeling especially guilty due to work encroaching on parenting time, it might help to openly discuss and renegotiate division of childcare labor or childcare norms within the family. Our results suggest enduring norms are a more important lever than brief breaks afforded by daily spouse availability. These results also demonstrate an important point of intervention for family counselors and highlight the need to improve work-life balance and address the imbalance in family responsibilities from a family systems perspective.

Limitations and Future Directions

An important limitation of our study is its focus on a specific family structure (heterosexual parents with at least one biological child) and child age period (adolescence). We limited our sample because we were concerned there may be different parenting or caregiving norms for children in different family structures (Kalil et al., 2014). These norms may in turn modify the motivation potential of work-family conflict and partner caregiving contributions. For example, same-gendered couples tend to have more equal division of labor norms compared to heterosexual couples (Goldberg et al., 2012; Patterson et al., 2004). Similarly, parenting behaviors and patterns differ across child ages, with children requiring less care for basic needs as they enter adolescence, but more social and emotional support for navigating complex situations and developing identity (Branje et al., 2010; Soenens et al., 2019). In some ways our specific sample strengthens our study, as we limit alternative explanations or sources of error variance. However, this comes at the cost of sample representativeness and generalizability. We strongly advocate for extension of this work in alternative family structures (e.g., same-gendered couples, adoptive families, step families, long-term unwed partner families). We also expect the effects found here

might be more pronounced for parents of children who require more involved care (children with disabilities, younger children), but research is needed to test this idea.

Our study focused specifically on and is most relevant to parents of adolescents. Adolescence is a distinct life stage marked by changes in personality, self-concept, and parent–child relationships and interactions (Bariola et al., 2011; Costa et al., 2019; Smith, 2016; Vannucci et al., 2019). Although adolescents are becoming autonomous, research clearly shows parent-adolescent interactions play a pivotal role in emotional and social adjustment (Branje et al., 2010; Soenens et al., 2019). Given the importance of parent-adolescent interactions for development and the scant research on parents of adolescents as compared to younger children, we wanted to explore whether theoretical models apply to parents of adolescents.

One notable strength of our study is the within-person experimental vignette design which is effective for isolating and testing cognitive processes that occur when parents experience WIF. Our design is especially novel for studying processes underlying work-to-parenting spillover, as nearly all studies in this area use field-based observational designs. The experimental design allows us to establish clear temporal precedence and causality between work-family conflict and felt obligation to engage with adolescents. The within-person design allows us to rule out person-level confounds. Unfortunately, high control and internal validity also comes at the cost of external validity. Although we followed best practice recommendations make scenarios realistic, real world experiences may have additional qualities that alter the motivational process illustrated here (e.g., multiple work or family events, family climate or norms, alternative sources of childcare). Our Study 2 mediator and outcomes are measured simultaneously. While we have strong theoretical guidance to suggest cognitions and emotions predict felt obligation to engage in parent-adolescent, the reverse is possible.

Effect sizes were small in magnitude and some effects emerged as significant when not controlling for all modifying factors. We strongly recommended that this study is replicated and expanded upon using experience sampling designs. An especially strong study might use time-series designs to track motivational emotions and cognitions, as well as parent-adolescent behavior before and after WIF occurs (e.g., French & Allen, 2020).

We focused on obligation to engage with adolescents as our primary outcome based on our theoretical rationale which positions daily parent-adolescent engagement as a goal-driven activity as parents strive to fulfill their superordinate goal of being a supportive parent (e.g., Daly, 1996; Milkie et al., 2019; Roeters & Gracia, 2016; Rutigliano et al., 2023). Other similar intentions (e.g., wanting, or desiring engagement) or experiences (expected pressure from a partner, planning cognitions) might follow a different pattern. We also did not include actual parent-adolescent engagement, instead focusing on intention (or felt obligation) as a cognitive precursor that might be better captured using a vignette design. Parents' intentions don't necessarily result in actual daily engagement (Aarntzen et al., 2019), thus it is unclear whether the emotional and cognitive motivational process studied here would result in actual behavior change. It would be informative to know when felt obligation leads to parent-adolescent engagement. Additionally, there is a need to identify work and family barriers and facilitators for compensation as it occurs in real life.

To manage study feasibility and participant fatigue, our measures were largely study-developed, single-item measures. Our variables were relatively narrow in scope and clearly defined, making single-item measures arguably better than multi-item ones, which may be overly repetitive or include items that stray from the construct definition (Allen et al., 2022; Fisher et al., 2016; Matthews et al., 2022). Our items were grounded in existing measures and showed good convergent validity with other measures. Our approach is also consistent with other research that uses single-item measures for similar constructs (e.g., Bono et al., 2013; Kluwer et al., 1996; Shockley et al., 2022). Nevertheless, it is important to keep measurement concerns in mind and to replicate our findings with alternative measurement and design strategies.

Thinking about family engagement as a goal-driven process opens the door to more complex work-to-parenting questions and possible trends. For example, it is often assumed that more parent–child engagement is better or needed, but perhaps parents' goals are working more towards satisficing work and family than maximizing (Schwartz et al., 2002). Research on individual and shared work and family goals among couples would be fruitful for understanding what drives work and family behavior. Additionally, given the novelty of sequencing and examining how work-family strategies change over time, it is unclear when or for whom strategies are effective for work and family performance, as well as individual and family member wellbeing. In order to understand work-family conflict as part of a motivational goal striving process, there is an acute need for more within-person and experimental research, which measures people against their own norm, rather than individuals against one another.

Conclusion

We take a joint action-regulation perspective to understand when and why parents feel motivated to make up for lost parenting time due to work interference with family (WIF). Findings from two vignette studies suggest parents sequence their work and family responsibilities when WIF occurs in order to compensate for lost time. Parents feel reduced obligation to spend time with children the day WIF occurs but increased obligation to spend time with children the following day. This sequencing is motivated by guilt and, perhaps to a lesser extent, by unmet family goals. Further, felt obligation to engage with children can be alleviated when spouses typically take on a higher portion of childcare. Overall, our study challenges the notion that episodes of WIF are purely depleting and instead suggests they can be motivational over time, contingent upon family caregiving norms.

Acknowledgements Not relevant

Authors Contributions This research was led by KF, including initial study design and protocol/survey development, data collection, funding, analysis, and write-up. SL collaborated on all ideas, theory development, and study design, and provided feedback and edits for all stages of the research process.

Funding Songqi Liu's work on the research was supported by National Science Foundation, Grant/Award

Numbers: SES-1629222. Kim French's research was supported in part by the National Institute for Occupational Safety and Health Mountain and Plains Education and Research Center (T42 OH009229).

Data Availability Code, output, and supplementary materials are available on the study OSF page (https://osf.io/s952n/?view_only=734ff9cc08c7449b9ef33208d3f7effb). Data are available from the first author upon request.

Declarations

Ethical Approval and Consent to Participate The studies in this manuscript were approved by the Georgia Tech Institutional Review Board (Protocol H21333). Informed consent is described in the manuscript.

Consent for Publication Not relevant.

Conflict of Interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

References

- Aarntzen, L., Derks, B., Van Steenbergen, E., Ryan, M., & Van Der Lippe, T. (2019). Work-family guilt as a straightjacket. An interview and diary study on consequences of mothers' work-family guilt. *Journal of Vocational Behavior*, 115, 103336. <https://doi.org/10.1016/j.jvb.2019.103336>
- Aguinis, H., & Bradley, K. J. (2014). Best practice recommendations for designing and implementing experimental vignette methodology studies. *Organizational Research Methods*, 17(4), 351–371. <https://doi.org/10.1177/1094428114547952>
- Aguinis, H., Villamor, I., & Ramani, R. S. (2021). MTurk research: Review and recommendations. *Journal of Management*, 47(4), 823–837. <https://doi.org/10.1177/0149206320969787>
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Sage.
- Allen, T. D., & French, K. A. (2023). Work-family research: A review and next steps. *Personnel Psychology*, 76(2), 437–471. <https://doi.org/10.1111/peps.12573>
- Allen, M. S., Iliescu, D., & Greiff, S. (2022). Single item measures in psychological science. *European Journal of Psychological Assessment*, 38(1), 1–5. <https://doi.org/10.1027/1015-5759/a000699>
- Almeida, D. M., & McDonald, D. (1998). Weekly rhythms of parents' work stress, home stress, and parent-adolescent tension. *New Directions for Child and Adolescent Development*, 1998(82), 53–68. <https://doi.org/10.1002/cd.23219988205>
- Almeida, D. M., Wethington, E., & Chandler, A. L. (1999). Daily transmission of tensions between marital dyads and parent-child dyads. *Journal of Marriage and the Family*, 61(1), 49. <https://doi.org/10.2307/353882>
- Amodio, D. M., Devine, P. G., & Harmon-Jones, E. (2007). A dynamic model of guilt: Implications for motivation and self-regulation in the context of prejudice. *Psychological Science*, 18(6), 524–530. <https://doi.org/10.1111/j.1467-9280.2007.01933.x>
- Asparouhov, T., & Muthén, B. (2021). Bayesian estimation of single and multilevel models with latent variable interactions. *Structural Equation Modeling: A Multidisciplinary Journal*, 28(2), 314–328. <https://doi.org/10.1080/10705511.2020.1761808>
- Austin, J. T., & Vancouver, J. B. (1996). Goal constructs in psychology: Structure, process, and content. *Psychological Bulletin*, 120(3), 338–375. <https://doi.org/10.1037/0033-2909.120.3.338>
- Baltes, B. B., & Heydens-Gahir, H. A. (2003). Reduction of work-family conflict through the use of selection, optimization, and compensation behaviors. *Journal of Applied Psychology*, 88(6), 1005–1018. <https://doi.org/10.1037/0021-9010.88.6.1005>
- Barber, L. K., & Santuzzi, A. M. (2015). Please respond ASAP: Workplace telepressure and employee recovery. *Journal of Occupational Health Psychology*, 20(2), 172–189. <https://doi.org/10.1037/a0038278>. APA PsycInfo.

- Bariola, E., Gullone, E., & Hughes, E. K. (2011). Child and Adolescent Emotion Regulation: The Role of Parental Emotion Regulation and Expression. *Clinical Child and Family Psychology Review*, 14(2), 198–212. <https://doi.org/10.1007/s10567-011-0092-5>
- Barling, J., & Mendelson, M. B. (1999). Parents' job insecurity affects children's grade performance through the indirect effects of beliefs in an unjust world and negative mood. *Journal of Occupational Health Psychology*, 4(4), 347–355. <https://doi.org/10.1037/1076-8998.4.4.347>
- Barling, J., Dupre, K. E., & Hepburn, C. G. (1998). Effects of parents' job insecurity on children's work beliefs and attitudes. *Journal of Applied Psychology*, 83(1), 112–118. <https://doi.org/10.1037/0021-9010.83.1.112>
- Bass, B. L., Butler, A. B., Grzywacz, J. G., & Linney, K. D. (2009). Do job demands undermine parenting? A daily analysis of spillover and crossover effects. *Family Relations*, 58(2), 201–215. <https://doi.org/10.1111/j.1741-3729.2008.00547.x>
- Bates, D., Maechler, M., Bolker, B., & Walker, S. (2015). Fitting linear mixed-effects models using lme4. *Journal of Statistical Software*, 67(1), 1–48. <https://doi.org/10.18637/jss.v067.i01>
- Baumeister, R. F., Stillwell, A. M., & Heatherton, T. F. (1994). Guilt: An interpersonal approach. *Psychological Bulletin*, 115(2), 243–267. <https://doi.org/10.1037/0033-2909.115.2.243>
- Belsky, J. (1984). The determinants of parenting: A process model. *Child Development*, 55(1), 83–96. <https://doi.org/10.2307/1129836>
- Blair-Loy, M. (2005). *Competing devotions: Career and family among women executives*. Harvard University Press.
- Bono, J. E., Glomb, T. M., Shen, W., Kim, E., & Koch, A. J. (2013). Building positive resources: Effects of positive events and positive reflection on work stress and health. *The Academy of Management Journal*, 56(6), 1601–1627. <https://doi.org/10.5465/amj.2011.0272>
- Borelli, J. L., Nelson, S. K., River, L. M., Birken, S. A., & Moss-Racusin, C. (2017). Gender differences in work-family guilt in parents of young children. *Sex Roles*, 76(5), 356–368. <https://doi.org/10.1007/s11199-016-0579-0>
- Branje, S., Laursen, B., & Collins, W. A. (2010). Parent–child communication during adolescence. In A. L. Vangelisti (Ed.), *The Routledge Handbook of Family Communication* (2nd ed., pp. 271–286). Routledge. <https://doi.org/10.4324/9780203848166.ch17>
- Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*, 22(6), 723–742. <https://doi.org/10.1037/0012-1649.22.6.723>
- Bryant, W. K., & Zick, C. D. (1996). An examination of parent-child shared time. *Journal of Marriage and the Family*, 58(1), 227–237. <https://doi.org/10.2307/353391>
- Carver, C. S., & Scheier, M. F. (1982). Control theory: A useful conceptual framework for personality—social, clinical, and health psychology. *Psychological Bulletin*, 92(1), 111–135. <https://doi.org/10.1037/0033-2909.92.1.111>
- Chen, S., & Cheng, M.-I. (2023). Exploring the reciprocal nature of work-family guilt and its effects on work/family-related performance. *Community, Work & Family*, 1–16. <https://doi.org/10.1080/13668803.2023.2192379>
- Cheung, J. H., Burns, D. K., Sinclair, R. R., & Sliter, M. (2017). Amazon mechanical turk in organizational psychology: An evaluation and practical recommendations. *Journal of Business and Psychology*, 32(4), 347–361. <https://doi.org/10.1007/s10869-016-9458-5>
- Cho, E., & Allen, T. D. (2012). Relationship between work interference with family and parent–child interactive behavior: Can guilt help? *Journal of Vocational Behavior*, 80(2), 276–287. <https://doi.org/10.1016/j.jvb.2011.12.002>
- Cho, E., & Ciancetta, L. (2016). Child outcomes associated with parent work–family experiences. In T. D. Allen & L. T. Eby (Eds.), *The Oxford Handbook of Work and Family* (Vol. 1, pp. 151–164). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199337538.013.12>
- Cinamon, R. G., & Rich, Y. (2002). Gender differences in the importance of work and family roles: Implications for work–family conflict. *Sex Roles*, 11(47), 531–541.
- Cinamon, R. G., Weisel, A., & Tzuk, K. (2007). Work–family conflict within the family: Crossover effects, perceived parent–child interaction quality, parental self-efficacy, and life role attributions. *Journal of Career Development*, 34(1), 79–100. <https://doi.org/10.1177/0894845307304066>
- Cluley, H., & Hecht, T. D. (2020). Micro work-family decision-making of dual-income couples with young children: What does a couple like us do in a situation like this? *Journal of Occupational and Organizational Psychology*, 93(1), 45–72. <https://doi.org/10.1111/joop.12282>

- Cooklin, A. R., Westrupp, E. M., Strazdins, L., Giallo, R., Martin, A., & Nicholson, J. M. (2016). Fathers at Work: Work-Family Conflict, Work-Family Enrichment and Parenting in an Australian Cohort. *Journal of Family Issues*, 37(11), 1611–1635. <https://doi.org/10.1177/0192513X14553054>
- Costa, P. T., McCrae, R. R., & Löckenhoff, C. E. (2019). Personality across the life span. *Annual Review of Psychology*, 70(1), 423–448. <https://doi.org/10.1146/annurev-psych-010418-103244>
- Costigan, C. L., Cox, M. J., & Cauce, A. M. (2003). Work-parenting linkages among dual-earner couples at the transition to parenthood. *Journal of Family Psychology*, 17(3), 397–408. <https://doi.org/10.1037/0893-3200.17.3.397>
- Cunningham, C. J. L. (2011). How interrole conflict research can have a greater impact. *Industrial and Organizational Psychology*, 4(3), 370–374. <https://doi.org/10.1111/j.1754-9434.2011.01354.x>
- Dai, G., Zhang, L., Kay, A. A., Li, Y., Mao, M., & Zhang, Q. (2024). Family intergenerational stress: Concept exploration and development via coping and identity management. *Journal of Occupational Health Psychology*. <https://doi.org/10.1037/ocp0000388>
- Daly, K. J. (1996). Spending time with the kids: Meanings of family time for fathers. *Family Relations*, 45(4), 466–476. <https://doi.org/10.2307/585177>
- Daly, K. J. (2001). Deconstructing family time: From ideology to lived experience. *Journal of Marriage and Family*, 63(2), 283–294. <https://doi.org/10.1111/j.1741-3737.2001.00283.x>
- Davis, K. D., Crouter, A. C., & work(s): S. M. M. R. (2006). Implications of shift work for parent-adolescent relationships in dual-earner families. *Family Relations*, 55(4), 450–460.
- Dryžaitė, I., & Tereškinas, A. (2022). Around the clock: Time and precarity in family life. *Culture & Society*, 13, 7–25. <https://doi.org/10.7220/2335-8777.13.1>
- Edwards, J. R. (1992). A cybernetic theory of stress, coping, and well-being in organizations. *The Academy of Management Review*, 17(2), 238–274. <https://doi.org/10.2307/258772>
- Edwards, J. R., & Rothbard, N. P. (2000). Mechanisms linking work and family: Clarifying the relationship between work and family constructs. *Academy of Management Review*, 25(1), 178–199.
- Faircloth, C. (2014). Intensive parenting and the expansion of parenting. In E. Lee, J. Bristow, C. Faircloth, & J. Macvarish (Eds.), *Parenting culture studies* (pp. 25–50). Palgrave Macmillan.
- Fisher, G. G., Matthews, R. A., & Gibbons, A. M. (2016). Developing and investigating the use of single-item measures in organizational research. *Journal of Occupational Health Psychology*, 21(1), 3–23. APA PsycInfo. <https://doi.org/10.1037/a0039139>
- French, K. A., & Allen, T. D. (2020). Episodic work-family conflict and strain: A dynamic perspective. *Journal of Applied Psychology*, 105(8), 863–888. <https://doi.org/10.1037/apl0000470>
- French, K. A., & Shockley, K. M. (2020). Formal and informal supports for managing work and family. *Current Directions in Psychological Science*, 29(2), 207–216. <https://doi.org/10.1177/0963721420906218>
- French, K. A., Butts, M. M., & Allen, T. D. (2016). Parent work conditions and adolescent core self-evaluations: Examining the effects of work resource drain and parent gender. *Journal of Business and Psychology*, 31(4), 553–568. <https://doi.org/10.1007/s10869-015-9429-2>
- French, K. A., Liu, S., Ohannessian, C. M., & Tennen, H. (2024). How does work affect fathers' daily interaction with adolescents? An expanded self-regulation perspective. *Journal of Organizational Behavior*. <https://doi.org/10.1002/job.2770>
- Frese, M., & Zapf, D. (1994). Action as the core of work psychology: A German approach. In H. C. Triandis, M. D. Dunnette, & L. M. Hough (Eds.), *Handbook of Industrial and Organizational Psychology* (2nd ed., Vol. 4, pp. 271–340). Consulting Psychologists Press. <http://www.evidence-based-entrepreneurship.com/content/publications/152.pdf>
- Freund, A. M., & Baltes, P. B. (2002). Life-management strategies of selection, optimization and compensation: Measurement by self-report and construct validity. *Journal of Personality and Social Psychology*, 82(4), 642–662. <https://doi.org/10.1037/0022-3514.82.4.642>
- Gassman-Pines, A. (2011). Low-income mothers' nighttime and weekend work: Daily associations with child behavior, mother-child interactions, and mood. *Family Relations*, 60(1), 15–29. <https://doi.org/10.1111/j.1741-3729.2010.00630.x>
- Geldhof, G. J., Preacher, K. J., & Zyphur, M. J. (2014). Reliability estimation in a multilevel confirmatory factor analysis framework. *Psychological Methods*, 19(1), 72–91. <https://doi.org/10.1037/a0032138>
- Glatz, T., & Buchanan, C. M. (2015). Change and predictors of change in parental self-efficacy from early to middle adolescence. *Developmental Psychology*, 51(10), 1367–1379. <https://doi.org/10.1037/dev0000035>

- Goldberg, A. E., Smith, J. Z., & Perry-Jenkins, M. (2012). The division of labor in lesbian, gay, and heterosexual new adoptive parents. *Journal of Marriage and Family*, 74(4), 812–828. <https://doi.org/10.1111/j.1741-3737.2012.00992.x>
- Grandey, A. A. (2008). Emotions at work: A review and research agenda. In C. L. Cooper & J. Barling (Eds.), *The Sage handbook of organizational behavior: Volume 1, Micro approaches* (pp. 235–261). Sage. <https://doi.org/10.4135/9781849200448>
- Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of Management Review*, 10(1), 76–88.
- Greenhaus, J. H., & Powell, G. N. (2003). When work and family collide: Deciding between competing role demands. *Organizational Behavior and Human Decision Processes*, 90(2), 291–303. [https://doi.org/10.1016/S0749-5978\(02\)00519-8](https://doi.org/10.1016/S0749-5978(02)00519-8)
- Guendouzi, J. (2006). “The Guilt Thing”: Balancing Domestic and Professional Roles. *Journal of Marriage and Family*, 68(4), 901–909. <https://doi.org/10.1111/j.1741-3737.2006.00303.x>
- Guo, Y., Logan, H. L., Glueck, D. H., & Muller, K. E. (2013). Selecting a sample size for studies with repeated measures. *BMC Medical Research Methodology*, 13(1), 100. <https://doi.org/10.1186/1471-2288-13-100>
- Harvey, A. S., & Mukhopadhyay, A. K. (2007). When twenty-four hours is not enough: Time poverty of working parents. *Social Indicators Research*, 82(1), 57–77. <https://doi.org/10.1007/s11205-006-9002-5>
- Haun, V. C., Rimmel, C., & Haun, S. (2022). Boundary management and recovery when working from home: The moderating roles of segmentation preference and availability demands. *German Journal of Human Resource Management*, 36(3), 270–299. <https://doi.org/10.1177/23970022221079048>
- Hetrick, A. L., Haynes, N. J., Clark, M. A., & Sanders, K. N. (2023). The theoretical and empirical utility of dimension-based work–family conflict: A meta-analysis. *Journal of Applied Psychology*, No Pagination Specified-No Pagination Specified. <https://doi.org/10.1037/apl0000552>
- Hirschi, A., Shockley, K. M., & Zacher, H. (2019). Achieving work-family balance: An action regulation model. *Academy of Management Review*, 44(1), 150–171. <https://doi.org/10.5465/amr.2016.0409>
- Hirschi, A., Von Allmen, N., Burmeister, A., & Zacher, H. (2022). Action regulation at the work–family interface: Nomological network and work–family consequences. *Journal of Business and Psychology*, 37(2), 369–387. <https://doi.org/10.1007/s10869-021-09751-6>
- Hobfoll, S. E., Halbesleben, J., Neveu, J.-P., & Westman, M. (2018). Conservation of resources in the organizational context: The reality of resources and their consequences. *Annual Review of Organizational Psychology and Organizational Behavior*, 5(1), 103–128. <https://doi.org/10.1146/annurev-orgpsych-032117-104640>
- Johnson, R. E., Chang, C.-H., & Lord, R. G. (2006). Moving from cognition to behavior: What the research says. *Psychological Bulletin*, 132(3), 381–415. <https://doi.org/10.1037/0033-2909.132.3.381>
- Judge, T. A., Ilies, R., & Scott, B. A. (2006). Work-Family Conflict and Emotions: Effects at Work and at Home. *Personnel Psychology*, 59(4), 779–814. <https://doi.org/10.1111/j.1744-6570.2006.00054.x>
- Kalil, A., Ryan, R., & Chor, E. (2014). Time investments in children across family structures. *The Annals of the American Academy of Political and Social Science*, 654(1), 150–168. <https://doi.org/10.1177/0002716214528276>
- Kim, S., & Hong, S. (2020). Comparing methods for multilevel moderated mediation: A decomposed-first strategy. *Structural Equation Modeling*, 27(5), 661–677. <https://doi.org/10.1080/10705511.2019.1683015>
- Kluwer, E. S., Heesink, J. A. M., & De Vliert, E. V. (1996). Marital Conflict about the Division of Household Labor and Paid Work. *Journal of Marriage and the Family*, 58(4), 958. <https://doi.org/10.2307/353983>
- Korabik, K. (2015). The intersection of gender and work–family guilt. In M. J. Mills (Ed.), *Gender and the Work-Family Experience: An Intersection of Two Domains* (pp. 141–157). Springer International Publishing. https://doi.org/10.1007/978-3-319-08891-4_8
- Kossek, E. (2006). Workplace policies and practices to support work and families. In S. M. Bianchi, A. Casper, & R. B. King (Eds.), *Work, Family, Health, and Well-Being* (pp. 104–122). Routledge.
- Krannitz, M. A., Grandey, A. A., Liu, S., & Almeida, D. M. (2015). Workplace surface acting and marital partner discontent: Anxiety and exhaustion spillover mechanisms. *Journal of Occupational Health Psychology*, 20(3), 314–325. <https://doi.org/10.1037/a0038763>. APA PsycInfo.

- Kreiner, G. E., Hollensbe, E. C., & Sheep, M. L. (2009). Balancing borders and bridges: Negotiating the work-home interface via boundary work tactics. *Academy of Management Journal*, 52(4), 704–730. <https://doi.org/10.5465/amj.2009.43669916>
- Liu, S., Wang, M., Zhan, Y., & Shi, J. (2009). Daily work stress and alcohol use: Testing the cross-level moderation effects of neuroticism and job involvement. *Personnel Psychology*, 62(3), 575–597. <https://doi.org/10.1111/j.1744-6570.2009.01149.x>
- Livingston, B. A., & Whan Ryu, S. (2020). Gender and spousal negotiation. In M. Olekalns & J. Kennedy, *Research Handbook on Gender and Negotiation* (pp. 31–50). Edward Elgar Publishing. <https://doi.org/10.4337/9781788976763.00011>
- Livingston, B. A., & Judge, T. A. (2008). Emotional responses to work-family conflict: An examination of gender role orientation among working men and women. *Journal of Applied Psychology*, 93(1), 207–216. <https://doi.org/10.1037/0021-9010.93.1.207>
- MacEwen, K. E., & Barling, J. (1991). Effects of maternal employment experiences on children's behavior via mood, cognitive difficulties, and parenting behavior. *Journal of Marriage and Family*, 53(3), 635–644. <https://doi.org/10.2307/352739>
- Martínez, P., Carrasco, M. J., Aza, G., Blanco, A., & Espinar, I. (2011). Family Gender Role and Guilt in Spanish Dual-Earner Families. *Sex Roles*, 65(11–12), 813–826. <https://doi.org/10.1007/s11199-011-0031-4>
- Matias, M., & Recharte, J. (2020). Links between work-family conflict, enrichment, and adolescent well-being: Parents' and children's perspectives. *Family Relations*, 70(3), 840–858. <https://doi.org/10.1111/fare.12453>
- Matias, M., Ferreira, T., Vieira, J., Cadima, J., Leal, T., Matos, M., & P. (2017a). Work-family conflict, psychological availability, and child emotion regulation: Spillover and crossover in dual-earner families. *Personal Relationships*, 24(3), 623–639. <https://doi.org/10.1111/pere.12198>
- Matias, M., Ferreira, T., Vieira, J., Cadima, J., Leal, T., Matos, M., & P. (2017b). Work-family conflict, psychological availability, and child emotion regulation: Spillover and crossover in dual-earner families: Spillover and crossover in dual-earner families. *Personal Relationships*, 24(3), 623–639. <https://doi.org/10.1111/pere.12198>
- Matthews, R. A., Pineault, L., & Hong, Y.-H. (2022). Normalizing the use of single-item measures: Validation of the single-item compendium for organizational psychology. *Journal of Business and Psychology*, 37(4), 639–673. <https://doi.org/10.1007/s10869-022-09813-3>
- Matthews, R. A., Wayne, J. H., & McKersie, S. J. (2016). Theoretical approaches to the study of work and family: Avoiding stagnation via effective theory borrowing. In T. D. Allen & L. T. Eby (Eds.), *The Oxford Handbook of Work and Family* (pp. 25–35). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199337538.001.0001>
- Medved, C. E. (2004). The everyday accomplishment of work and family: Exploring practical actions in daily routines. *Communication Studies*, 55(1), 128–145. <https://doi.org/10.1080/10510970409388609>
- Meier, A., Musick, K., Flood, S., & Dunifon, R. (2016). Mothering Experiences: How Single Parenthood and Employment Structure the Emotional Valence of Parenting. *Demography*, 53(3), 649–674. <https://doi.org/10.1007/s13524-016-0474-x>
- Milkie, M. A., Mattingly, M. J., Nomaguchi, K. M., Bianchi, S. M., & Robinson, J. P. (2004). The time squeeze: Parental statuses and feelings about time with children. *Journal of Marriage and Family*, 66(3), 739–761. <https://doi.org/10.1111/j.0022-2445.2004.00050.x>
- Milkie, M. A., Nomaguchi, K., & Schieman, S. (2019). Time deficits with children: The link to parents' mental and physical health. *Society and Mental Health*, 9(3), 277–295. <https://doi.org/10.1177/2156869318767488>
- Mitchell, T. R., & James, L. R. (2001). Building Better Theory: Time and the Specification of When Things Happen. *The Academy of Management Review*, 26(4), 530. <https://doi.org/10.2307/3560240>
- Muthén, L. K., & Muthén, B. O. (2017). *Mplus user's guide* (8th ed.). [Computer software]. Muthén & Muthén.
- Patterson, C. J., Sutfin, E. L., & Fulcher, M. (2004). Division of labor among lesbian and heterosexual parenting couples: Correlates of specialized versus shared patterns. *Journal of Adult Development*, 11(3), 179–189. <https://doi.org/10.1023/B:JADE.0000035626.90331.47>
- Powell, G. N., & Greenhaus, J. H. (2006). Managing incidents of work-family conflict: A decision-making perspective. *Human Relations*, 59(9), 1179–1212. <https://doi.org/10.1177/0018726706069765>
- Preacher, K. J., Zyphur, M. J., & Zhang, Z. (2010). A general multilevel SEM framework for assessing multilevel mediation. *Psychological Methods*, 15(3), 209–233. <https://doi.org/10.1037/a0020141>

- Preacher, K. J., Zhang, Z., & Zyphur, M. J. (2016). Multilevel structural equation models for assessing moderation within and across levels of analysis. *Psychological Methods*, 21(2), 189–205. <https://doi.org/10.1037/met0000052>
- R Core Team. (2022). *R: A language and environment for statistical computing* [Computer software]. R Foundation for Statistical Computing. <https://www.R-project.org/>
- Radcliffe, L. S., & Cassell, C. (2014). Resolving couples' work–family conflicts: The complexity of decision making and the introduction of a new framework. *Human Relations*, 67(7), 793–819. <https://doi.org/10.1177/0018726713506022>
- Reimann, M., Schulz, F., Marx, C. K., & Lükemann, L. (2022). The family side of work–family conflict: A literature review of antecedents and consequences. *Journal of Family Research*, 34(4), 4. <https://doi.org/10.20377/jfr-859>
- Repetti, R. L. (1994). Short-term and long-term processes linking job stressors to father–child interaction. *Social Development*, 3(1), 1–15. <https://doi.org/10.1111/j.1467-9507.1994.tb00020.x>
- Repetti, R. L., & Wood, J. (1997). Effects of daily stress at work on mothers' interactions with preschoolers. *Journal of Family Psychology*, 11(1), 90–108. <https://doi.org/10.1037/0893-3200.11.1.90>
- Repetti, R. L., Wang, S., & Saxbe, D. (2009). Bringing it all back home: How outside stressors shape families' everyday lives. *Current Directions in Psychological Science*, 18(2), 106–111. <https://doi.org/10.1111/j.1467-8721.2009.01618.x>
- River, L. M., Borelli, J. L., & Nelson-Coffey, S. K. (2019). Tolerance of infant distress among working parents: Examining the roles of attachment anxiety and work–family conflict. *Parenting*, 19, 137–159. <https://doi.org/10.1080/15295192.2019.1556023>
- Roeters, A., & Gracia, P. (2016). Child care time, parents' well-being, and gender: Evidence from the american time use survey. *Journal of Child and Family Studies*, 25(8), 2469–2479. <https://doi.org/10.1007/s10826-016-0416-7>
- Roeters, A., & van Houdt, K. (2019). Parent–child activities, paid work interference, and child mental health: Parent–child time and child mental health. *Family Relations*, 68(2), 232–245. <https://doi.org/10.1111/fare.12355>
- Roeters, A., Van Der Lippe, T., & Kluwer, E. S. (2009). Parental work demands and the frequency of child-related routine and interactive activities. *Journal of Marriage and Family*, 71(5), 1193–1204. <https://doi.org/10.1111/j.1741-3737.2009.00663.x>
- Roeters, A., Lippe, T. V. D., & Kluwer, E. S. (2010). Work characteristics and parent–child relationship quality: The mediating role of temporal involvement. *Journal of Marriage and Family*, 72(5), 1317–1328. <https://doi.org/10.1111/j.1741-3737.2010.00767.x>
- Roeters, A., van der Lippe, T., Kluwer, E., & Raub, W. (2012). Parental work characteristics and time with children: The moderating effects of parent's gender and children's age. *International Sociology*, 27(6), 846–863. <https://doi.org/10.1177/0268580911423049>
- Rutigliano, B. E., Randolph, A. L., & Park, C. N. (2023). Understanding parents' self-awareness of their parenting style(s) and its influences on their parenting choices—A grounded theory study. *The Family Journal*, 31(3), 385–391. <https://doi.org/10.1177/10664807231163268>
- Schwartz, B., Ward, A., Monterosso, J., Lyubomirsky, S., White, K., & Lehman, D. R. (2002). Maximizing versus satisficing: Happiness is a matter of choice. *Journal of Personality and Social Psychology*, 83(5), 1178–1197. <https://doi.org/10.1037/0022-3514.83.5.1178>
- Shipp, A. J., & Cole, M. S. (2015). Time in Individual-Level Organizational Studies: What Is It, How Is It Used, and Why Isn't It Exploited More Often? *Annual Review of Organizational Psychology and Organizational Behavior*, 2(1), 237–260. <https://doi.org/10.1146/annurev-orgpsych-032414-111245>
- Shockley, K. M., & Allen, T. D. (2013). Episodic work–family conflict, cardiovascular indicators, and social support: An experience sampling approach. *Journal of Occupational Health Psychology*, 18(3), 262–275. <https://doi.org/10.1037/a0033137>
- Shockley, K. M., & Allen, T. D. (2015). Deciding between work and family: An episodic approach. *Personnel Psychology*, 68(2), 283–318. <https://doi.org/10.1111/peps.12077>. APA PsycInfo.
- Shockley, K. M., Shen, W., DeNunzio, M. M., Arvan, M. L., & Knudsen, E. A. (2017). Disentangling the relationship between gender and work–family conflict: An integration of theoretical perspectives using meta-analytic methods. *Journal of Applied Psychology*, 102(12), 1601–1635. <https://doi.org/10.1037/apl0000246>. APA PsycInfo.
- Shockley, K. M., Clark, M. A., Dodd, H., & King, E. B. (2021). Work–family strategies during COVID-19: Examining gender dynamics among dual-earner couples with young children. *Journal of Applied Psychology*, 106(1), 15–28. <https://doi.org/10.1037/apl0000857>

- Shockley, K. M., Gabriel, A. S., & Yuan, Z. (2022). Profiles of attribution for work–family conflict episodes and their relation to negative emotions. *Journal of Organizational Behavior*, 43(4), 643–661. <https://doi.org/10.1002/job.2597>
- Shockley, K. M., & Shen, W. (2016). Couple dynamics: Division of labor. In T. D. Allen & L. T. Eby (Eds.), *The Oxford Handbook of Work and Family* (pp. 125–138). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199337538.001.0001>
- Smith, P. K. (2016). *Adolescence: A very short introduction*. Oxford University Press.
- Soenens, B., Vansteenkiste, M., & Beyers, W. (2019). Parenting adolescents. In M. H. Bornstein (Ed.), *Handbook of parenting: Children and parenting* (3rd ed., pp. 111–167). Routledge/Taylor & Francis Group. <https://doi.org/10.4324/9780429440847-4>
- Steiner, R. S., Hirschi, A., & Wang, M. (2023). Crossover effects of parent work-to-family experiences on child work centrality: A moderated mediation model. *Journal of Applied Psychology*, 108(6), 934–953.
- Stewart, W., & Barling, J. (1996). Fathers' work experiences effect children's behaviors via job-related affect and parenting behaviors. *Journal of Organizational Behavior*, 17(3), 221–232. [https://doi.org/10.1002/\(SICI\)1099-1379\(199605\)17:3%3c221::AID-JOB741%3e3.0.CO;2-G](https://doi.org/10.1002/(SICI)1099-1379(199605)17:3%3c221::AID-JOB741%3e3.0.CO;2-G)
- Tangney, J. (1990). Assessing individual differences in proneness to shame and guilt: Development of the self-conscious affect and attribution inventory. *Journal of Personality and Social Psychology*, 59, 102–111. <https://doi.org/10.1037/0022-3514.59.1.102>
- ten Brummelhuis, L. L., & Bakker, A. B. (2012). A resource perspective on the work–home interface: The work–home resources model. *American Psychologist*, 67(7), 545–556. <https://doi.org/10.1037/a0027974>
- Vannucci, A., Finan, L., Ohannessian, C. M., Tennen, H., De Los Reyes, A., & Liu, S. (2019). Protective factors associated with daily affective reactivity and instability during adolescence. *Journal of Youth and Adolescence*, 48(4), 771–787. <https://doi.org/10.1007/s10964-018-0943-1>
- Vieira, J. M., Matias, M., Ferreira, T., Lopez, F. G., & Matos, P. M. (2016a). Parents' work-family experiences and children's problem behaviors: The mediating role of the parent–child relationship. *Journal of Family Psychology*, 30(4), 419–430. <https://doi.org/10.1037/fam0000189>
- Vieira, J. M., Matias, M., Lopez, F. G., & Matos, P. M. (2016b). Relationships between work–family dynamics and parenting experiences: A dyadic analysis of dual-earner couples. *Work & Stress*, 30(3), 243–261. <https://doi.org/10.1080/02678373.2016.1211772>
- Winter, B. (2013). *Linear models and linear mixed effects models in R with linguistic applications* (arXiv: 1308.5499). arXiv. <http://arxiv.org/abs/1308.5499>

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Springer Nature or its licensor (e.g. a society or other partner) holds exclusive rights to this article under a publishing agreement with the author(s) or other rightsholder(s); author self-archiving of the accepted manuscript version of this article is solely governed by the terms of such publishing agreement and applicable law.