Juggling Demands: Allocating Time Between Family and Work

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ABSTRACT

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Given limited temporal resources, many individuals struggle with juggling time between multiple domains, such as family and work, and previous research has found that time-based conflicts between family and work can occur. Thus, it is important to understand the impact of family time on work time, and how different factors can influence this relation. In this research, I focused on the impact of family time on work time, and whether there are gender differences and occupational level differences in this relation. Archival data from the American Time Use Survey, which is a single-day, time-diary survey, were analyzed for this study; the data were available from a sample of 33,296 individuals from 2003 to 2015. Consistent with my hypotheses, I found that family time had a strengthening negative relation with work time. Also in line with my hypotheses, I found that women spent more time on family activities than men, and individuals in managerial jobs spent greater time working than individuals in non-managerial jobs. I put forward a research question about whether gender moderates the curvilinear relation between family time and work time. In line with past research, gender moderated the linear relation between family time and work time, but did not moderate the curvilinear relation between them. In contrast to my hypothesis, occupational level did not moderate the relation between family time and work time. Supplemental analyses including leisure time and sleep time provided support for the importance of slack time resources, suggesting that family time has a stronger relation with work time when temporal resources in other domains are exhausted. Overall, these findings contribute to the existing literature on the work-family interface.

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Introduction

For many employed individuals, family, work, sleep, and leisure are the main domains to which they allocate their time, and balancing the needs of these domains can be a source of tension in their lives (Flood & Genadek, 2016). When deciding how to allocate their time, individuals may have to prioritize some activities over others. Considering that time is limited (as there are 24 hours in a day), time spent in non-work domains is likely to affect time spent at work. In this study, I focus on time spent in the family domain—which includes caring for household members, cooking, cleaning, and managing household work—and its relation to time spent at work.

There has been extensive research on the work-nonwork interface, with attention being paid to ways in which demands from one domain can impact the other domains (e.g., Byron, 2005; Shockley, Shen, Denunzio, Arvan, & Knudsen, 2017). This research has shown that conflicts can occur between work and family, both in terms of work interfering with the family domain and in terms of the family domain interfering with work (see, for example, meta-analysis by Shockley et al., 2017). One main type of conflict is time-based conflict, which can occur because temporal resources are scarce, and time needs to be divided between work and family domains. The meta-analysis by Shockley et al. (2017) studied the relations between work time and work-to-family conflict and between family time and family-to-work conflict, and found that both relations were positive. Building on this, I believe that it is valuable to understand the impact of family time on work time, and how different factors can influence this relation. This is important because family demands, family role overload, and other family stressors have been shown to cause family-to-work conflict (Michel, Kotrba, Mitchelson, Clark, & Baltes, 2011). Thus, this study will specifically focus on the effect of family time on work time.

Over the years, time use has become the focus of an increasing body of research on the work-family interface (see, for example, meta-analysis by Byron, 2005). Large-scale time diary data sets have made it easier to assess the allocation of individuals' time to various family and work activities. The current study builds on this body of research by further examining the relation between family time and work time. As people have a limited number of hours available in a day, it is not surprising that past research has found that an increase in family time appears to have a negative impact on the time available for work (e.g., Barnes, Wagner, & Ghumman, 2012; Rothbard & Edwards, 2003). Moreover, in the face of growing demands to allocate time to different activities, I propose that this negative relation between family time and work time could be higher at greater levels of family time. This will occur because at higher levels of demands from a given domain, individuals have increasingly fewer slack time resources available at their disposal. Slack time resources represent time resources that are not being used efficiently or that have been allocated to non-essential activities (e.g., leisure; Barnes et al., 2012). When these resources have been exhausted, individuals have no option but to reduce time allocated to other domains such as sleep or work. Despite extensive research into time use, studies have not assessed the potential for a non-linear relation between family time and work time. Therefore, the primary goals of this study are to examine the impact of family time on work time, and to see whether the relation between family time and work time changes as family time increases.

The secondary goals of this study are to investigate whether there are gender differences and occupational level differences in the impact of family time on work time. Previous research has pointed to greater family time demands for women compared to men, and gender differences in family-to-work conflict have been extensively explored over the years (see meta-analysis by Shockley et al., 2017). Social norms and expectations surrounding the family responsibilities of

women compared to men include gender differences in family time and work time (e.g., Duxbury & Higgins, 1991; Martin, Pescosolido, & Tuch, 2000). Based on this, I will explore whether there are gender differences in the proposed non-linear relation between family time and work time. Furthermore, occupational-level differences are also likely to influence the allocation of time between family and work. Differences between managerial and non-managerial occupations in workload and the opportunity cost of allocating time from the work domain to the family domain can lead to different effects of family time on work time for managers versus non-managers. Therefore, it seems valuable to assess the relation between family time and work time at managerial and non-managerial levels, which may provide a better understanding of the sources of (time-based) conflict between family and work domains.

This research contributes to the literature by finding that the relation between family time and work time is in fact curvilinear, which supports the notion of greater scarcity of time resources at higher levels of family demands. Understanding how increases in time demands from the family domain can have a stronger impact on the work domain when indivdiuals are faced with no slack resources is important. The study also contributes to the literature by revealing that gender differences in the effect of family time on work time are washed away when the curvilinear effect is taken into account, thus suggesting that men and women may face similar struggles in managing time demands in either domain. Finally, the study contributes to the literature by showing that occupational level differences do not appear to moderate the relation between family time and work time.

Theoretical Rationales for Hypotheses

The Overall Relation between Family Time and Work Time

Managing the demands of non-work and work domains can be a challenge when role pressures from multiple domains are mutually incompatible in some aspects. This phenomenon is typically referred to as inter-role (or work-family) conflict (Greenhaus & Beutell, 1985). One theory that has been proposed to explain such conflict is the resource drain model. The resource drain model explains that time is a limited resource that is allocated to different uses in a day. It further explains that when the domains of work and family compete for time, there can be a transfer of time resources from one domain to the other leading to lesser time and energy left for the domain from which resources were transferred (Edwards & Rothbard, 2000). For example, being faced with the responsibility of tending to a sick child could lead to the person allocating more time to the family domain and possibly taking time off from work to accommodate the demand for extra time for family. The exchange of limited time resources between domains can help to explain the negative impact of family time on work time because increased family demands may lead to less time being available to be allocated to work. This process has been termed family-to-work resource drain (Beigi, Shirmohammadi, & Otaye-Ebede, 2019). In line with the resource drain model, I postulate that people will have less time to dedicate to other activities, including work-related activities, as their allocation of time to family activities increases.

Previous research has emphasized that time spent on family activities and time spent working are competing for the same limited number of hours available, and thus family time has a negative correlation with work time (e.g., Barnes et al., 2012; Barnes, Lefter, Bhave, & Wagner, 2016; Bhave & Lefter, 2018; Frone, Yardley, & Markel, 1997; Rothbard & Edwards,

2003). However, the overall correlation reported in previous studies combines the effect of work time on family time with the effect of family time on work time. Rothbard and Edwards (2003) conducted the only study that has directly assessed the effect of family time on work time, and they concluded that family time investments have a negative impact on work time investments. To address the reverse causality problem in their study, the authors used the instrumental variable technique. Beyond studies that have specifically looked at time, other research has explored related issues. For example, Tenbrunsel, Brett, Maoz, Stroh, and Reilly (1995) found that family involvement has a negative impact on work involvement, reinforcing the resource-drain notion that the allocation of resources to one domain results in those resources becoming unavailable in the other domain. Also, daily relationship hassles, which can be considered as part of family time, have been shown to be a negative antecedent of daily time spent on work, such that individuals usually spend less time at work on days with a higher degree of relationship hassles than on days with a lower degree of relationship hassles (Unger, Niessen, Sonnentag, & Neff, 2014). This finding is also in line with the notion that time is a finite resource and that a (time) resource trade-off is present between family and work domains. Finally, meta-analytic findings indicate that as individuals spend more time on family-related activities, they experience more family interference with work (see meta-analyses by Byron, 2005, and Michel, Mitchelson, Kotrba, LeBreton, & Baltes, 2009). It should be noted, however, that the effect of family time demands on family-to-work conflict does not fully capture the effect of family time on work time because some individuals with higher family demands may have already adjusted their work hours in response to their increased family time needs, in which case they would not experience increased family-to-work conflict anymore. Based on the resource drain model and previous

evidence pointing to a negative impact of family time on work time, I propose the following hypothesis:

H1*: There is a negative relation between family time and work time.*

Beyond the fact that few studies have isolated the effect of family time on work time, and despite the fact that theory points to a strong negative relation between family time and work time, the existing evidence regarding the relation between family time and work time is mixed, with the strength of this relation varying across past studies (e.g., Barnes et al. 2012; Barnes et al., 2016; Bhave & Lefter, 2018; Frone et al., 1997; Rothbard & Edwards, 2003). In light of this, it seems reasonable to suggest that there might be boundary conditions or interactions that may explain some of this variation. One such interaction involves family time itself, and it is possible that the link between family time and work time is not uniform across different levels of family time, in which case the relation between family time and work time could become curvilinear (see Gardner, Harris, Li, Kirkman, & Mathieu, 2017, for an explanation of the logic behind such curvilinear effects).

My reasoning is based on the idea that when demands and pressures from a given domain are not intense, it is easier for people to juggle their time between domains; however, at higher levels of demands from the same domain, it becomes more challenging to readjust the limited minutes available. When deciding how to allocate their time resources, individuals may have to prioritize some activities over others. Taking care of family, doing household chores, performing personal care activities, and engaging in leisure will all have different levels of importance, and it seems reasonable to suggest that family care and household chores may take precedence over personal care and/or leisure activities. As mentioned, the resource drain model posits that increasing the time allocated to the family domain leaves less time for other domains. Whether

that time will be taken away from the work domain may depend on access to slack time resources.

Theoretically, slack time resources are time resources that are not being used efficiently or that have been allocated to non-essential activities (e.g., leisure; Barnes et al., 2012). As such, these blocks of time can be reallocated from one domain to another at minimal psychological, physiological, and/or financial costs to the individual. It is more difficult for individuals to take time away from essential activities due to the higher psychological, physiological, and/or financial costs that they would have to incur as a result. For example, taking time away from work can result in the psychological stress of being laid off or having an adverse employer perception of yourself. Similarly, taking considerable time away from sleep could have adverse health and well-being effects. If individuals have access to slack time resources, then these slack time resources can be used to meet increased family demands. However, as family demands continue to grow, slack time resources will eventually be depleted (Barnes et al., 2012).

At increasingly higher levels of family demands, individuals may need to start drawing time from other essential domains. In other words, when people are faced with the need for more time to fulfill high levels of family demands, they can use slack time resources from other non-work domains—up to the point where such slack time resources are depleted, after which they may need to turn to essential domains such as sleep (Barnes et al., 2012). I posit that increased demands for family time may also be fulfilled by drawing time from essential domains other than sleep, including work. The fact that it may become more difficult to draw from non-essential domains at high levels of family demands suggests that there could be a curvilinear strengthening relation between family time and work time, with the negative impact of family time on work time being strongest when family demands are at their highest (Barnes et al., 2012). To

elaborate, at higher time demands in the family domain, an extra hour spent with family is more likely to come at the expense of work time because slack time resources would no longer be available to meet the increasing family time demands. Thus, the negative relation between family time and work time may be stronger when slack time resources have been used up and little leeway remains to draw time from any other domain.

Although there is no direct empirical evidence for the curvilinear strengthening relation described above, Barnes et al. (2012) provided evidence of nonlinear relations between time spent with family and sleep time, on the one hand, and between time spent working and sleep time, on the other hand. They concluded that as slack time resources become increasingly scarce due to increased time demands for either family or work, the negative effects of family time and work time on sleep time become stronger. Thus, the effect of family time on sleep time is increasingly negative at higher levels of time spent on family activities (Barnes et al., 2012). Consistent with this argument, I propose that the effect of family time on work time is increasingly negative when demands for family time are higher, which results in a nonlinear relation between family time and work time.

H2*: There is a curvilinear strengthening relation between family time and work time such that the negative relation between them becomes stronger as family time increases.*

Gender Differences

Social role theory suggests that roles and duties in both the family and the work domains are dominated by gender belief systems (Eagle, Miles, & Icenogle, 1997). Specifically, the theory proposes that work and family roles are affected by the expectations of others regarding what is deemed appropriate behavior for a role when multiple demands are placed on an individual. As explained in the theory, women, when faced with competing demands, would

always prioritize family over work, whereas the work domain would be the preference for men when deciding on time allocation. As such, social role theory can help explain differences in time allocation decisions between men and women, as many societies stereotypically assign men to the breadwinner role and women to the homemaker role (Ellemers, 2018). Although there has been a general trend towards gender egalitarianism in recent years, the decline in traditional gender role attitudes varies across countries (Knight & Brinton, 2017). Further, there seems to be a recent lack of change in gender attitudes towards egalitarianism in the U.S., which might point to a new cultural frame in the American society that blends traditional motherhood roles with gender equality, despite an increasing number of working mothers (Cotter, Hermsen, & Vanneman, 2011). To elaborate, the change in gender attitudes refers to men and women becoming more involved in both domains, with women catering to motherhood duties as well as juggling work time demands.

Previous research shows that household labour has remained divided based on gender despite gradual convergence in the time spent by both genders on household tasks (Cerrato & Cifre, 2018; Lachance-Grzela & Bouchard, 2010). Although women's participation in paid employment has increased, they continue to face the responsibility of most of the unpaid duties in the home domain because men's participation in housework has increased at a much slower rate (Bianchi, Milkie, Sayer, & Robinson, 2000; Bianchi, Wight, & Raley, 2005; Coltrane, 2000; Yavorsky, Dush, & Schoppe-Sullivan, 2015). A recent report by the U.S. Bureau of Labor Statistics based on 2019 data from the American Time Use Survey revealed that women spent an average of 2.5 hours per day on household activities, whereas men spent only 1.9 hours (Bureau of Labour Statistics, 2020a), supporting previous research that has also found that women devote

greater time to family activities than men (Bhave & Lefter, 2018; Bianchi et al., 2000; Galinsky, Ku, & Wang, 2005; Gurley-Calvez, Biehl, & Harper, 2009; Shockley et al., 2017).

Historically, women have undertaken more family responsibilities than men (Lundberg, Mårdberg, & Frankenhaeuser, 1994; South & Spitze, 1994), and, as such, have allocated a greater portion of their time to household, childcare, and other non-work activities, regardless of the time demands of their work roles (Bielby & Bielby, 1989). Furthermore, they are more likely to take on additional family responsibilities, despite already spending greater time in the family domain (Bianchi et al., 2000; Gracia & Kalmijin, 2016). Even in situations where their work time demands are greater than those of men, women will give precedence to the family domain when balancing time demands (Flèche, Lepinteur, & Powdthavee, 2020). Related to this, employed mothers were found to engage in more household work and childcare than employed fathers even when their daily work hours were higher (Chesley & Flood, 2017; Craig & Mullan, 2010; Garcia-Roman & Cortina, 2016). Based on all of this, I propose the following hypothesis:

H3*: Women spend more time on family activities than men.*

As mentioned above, Rothbard and Edwards (2003) examined the effect of family time on work time and concluded that family time investments had a negative impact on work time investments. They also looked at the moderating effect of gender and found that family time investments were negatively related to work time investments for women, but not for men (Rothbard & Edwards, 2003). They suggested that this difference could be linked to role identification and, more specifically, to the fact that family identification is stronger for women than for men (Rothbard & Edwards, 2003), which is in line with social role theory, as previously discussed. I propose a different explanation that relates Rothbard and Edwards' (2003) findings to the curvilinear relation proposed in H2. The curvilinear relation posits that the effect of family

time on work time is stronger at higher levels of family time demands. If women spend more time on family activities than men, then the effect of family time on work time could be stronger (i.e., more negative) for women than for men (on average) simply because women spend more time engaged in family demands and, as such, are more likely to be on the higher end of the curve where the relation is more negative. Consistent with this proposition, Shockley et al. (2017) provided meta-analytic evidence of an indirect effect of gender on family-to-work conflict via family hours.

In such a scenario, the previously observed interaction between gender and family time on work time (e.g., Edwards & Rothbard, 2003) may reflect the curvilinear relation discussed in the preceding argument for H2. This is because family time and gender are related, and a test of their interaction may reflect a test of the curvilinearity of the relation between family time and work time. A moderation effect can mask curvilinearity when the focal independent variable and the moderator are related, as theorized by Gardner et al. (2017). Thus, the gender moderation proposed or observed in previous studies (i.e., Barnes et al., 2012; Edward & Rothbard, 2003) may actually be masking a family time moderation because of gender differences in family time. In other words, the moderation might not be driven by gender, but rather by family time itself. If this is true, we would not expect gender to moderate the curvilinear relation. Based on this, I propose the following research question:

RQ1*: Does gender moderate the curvilinear relation between family time and work time?*

Occupational Level Differences

Another factor that may be important in influencing work hours, and potentially the impact of family time on work time, is one's occupational level. The full-time workweek may be 40 hours per week for many workers, but for managerial-level jobs it often involves higher

numbers of work hours (Hewlett & Luce, 2006). Indeed, working hours are not distributed evenly across occupations, as managers and individuals in higher-level positions are the ones who put in the longest work hours (Gerson & Jacobs, 2004; Jacobs & Gerson, 2001; Lundberg et al., 1994). There are several reasons for this.

First, managerial jobs constitute a complex set of role obligations with high information-processing requirements that involve substantial work commitments (Allard, Haas, & Hwang, 2007; Gerson & Jacobs, 2004; Hewlett & Luce, 2006; Moore, Sikora, Grunberg, & Greenberg, 2007). Moreover, the need to keep up with competitors due to constant innovations has made managerial work more complex and time-demanding over the years (Higgins, Duxbury, & Johnson, 2000; Milliken & Dunn-Jensen, 2005).

Second, paid work at higher levels provides opportunities for increased self-efficacy, further recognition, and additional financial incentives despite the presence of competitive pressures (Barnett & Hyde, 2001). The desire to move up the hierarchy to seize these opportunities can lead to working longer hours. Higher up the corporate ladder, the stimulating and rewarding experiences of work, despite the increased workload, may also lead to a reduction in the benefits associated with minimizing work time. Thus, work devotion may increase due to the higher anticipated returns on time invested at work in the form of a higher probability of receiving a pay raise, a promotion, or a bonus (Blair-Loy, 2009; Milliken & Dunn-Jensen, 2005). Higgins et al. (2000) showed that women in managerial positions find work conditions more stimulating and more satisfying than do women in non-managerial positions, and thus are less likely to experience positive outcomes from reducing work time.

Third, the limited opportunities for promotion as managers climb to even higher levels of the hierarchy can make it socially imperative to put in a higher number of hours to signal one's

dedication to the job (Milliken & Dunn-Jensen, 2005). Also, concerns about perceptions of bosses and, historically, the norm of using physical presence (face time) for judging a subordinate's perceived commitment to the organization can also lead to longer work hours among managers. In addition, when work cannot be measured objectively and quantified, work hours may serve as a strong proxy for productivity, thus encouraging managers to work long hours to demonstrate that they are being productive.

Previous studies have concluded that managerial-level employees are dedicating greater hours to the work domain than those in non-managerial positions (Duxbury, Higgins, & Coghill, 2003; Gerson & Jacobs, 2004; Moore et al., 2007). Industry surveys revealed that 62% of high-earning individuals (those at top levels) work more than 50 hours a week, with 10% of them even putting in 80 hours per week (Hewlett & Luce, 2006). This is more than individuals at lower levels as a normal work-week is between 30 and 50 hours. Moreover, it has been shown that male and female managers are more likely than non-managerial employees to find it difficult to vary their hours of work, which provides evidence in support of lower work-time flexibility higher up the hierarchy (Duxbury et al., 2003). Managerial-level employees tend to resist flexible work schedules, as they fear their negative career impact, and instead prefer longer work hours (Kossek, Barber, & Winters, 1999).

Higgins et al. (2000) differentiated between career and non-career women (i.e., those employed in professional and managerial jobs versus those employed in technical, clerical, and administrative jobs), and found that both groups reported challenges in dealing with the time demands of childcare and household chores, but that career women were more involved in, and dedicated more time to, their work than non-career women. Promotions to senior levels give managerial women a feeling of belonging to the elite ranks, and the opportunity of becoming a

mentor to others. As such, these women dedicate more time to their work roles, as their responsibilities require longer hours and closer involvement with fellow workers (Epstein & Kalleberg, 2004). Based on the above, I hypothesize the following:

> ***H4****: Individuals in managerial jobs spend more time working than individuals in non-managerial jobs.*

Higher up the ladder, individuals are allocated additional responsibilities and duties. As such, hierarchical factors and social pressures can contribute to time allocation decisions, as individuals might feel threatened by being penalized for failing to fulfill managerial expectations. As discussed by Eastman (1998), to gain or secure positional standing relative to others, managerial employees tend to work longer hours. This means that taking time away from work to dedicate to family would come at a greater opportunity cost for them, as the time they allocate to work serves as a sign of commitment and dedication to their jobs that subsequently plays a vital role in the overall positive impression with the employer. As such, the already heavy work demands at a higher occupational level make it difficult for managerial employees to leave the job at the office. This is because, higher up the corporate hierarchy, managerial designation is coupled with further expectations from employers and additional responsibilities, leading to more work time demands (Duxbury, Higgins, & Lee, 1994; Higgins et al., 2000).

As the rewards from the long hours invested in managerial work increase, people prefer to dedicate those hours to the work domain rather than a role in the family domain that does not provide monetary or professional esteem benefits (Brett & Stroh, 2003). As a result, at higher levels of family demands, individuals higher up the hierarchy may be less likely to reduce their work time to meet those family demands. In other words, it seems reasonable to suggest that managerial employees will continue to work homogenously high hours regardless of their family

time demands. This is due to the higher opportunity costs in terms of status, financial rewards, and recognition, which will not allow them to draw significant time from work in response to family demands.

In support of these theoretical arguments, Moore et al. (2007) found that even when managerial-level workers experience an increase in family time, their work time does not necessarily go down. To date, however, no study has directly tested whether occupational level moderates the link between family time and work time. The occupational-level differences discussed above suggest that even when they experience increasing family time demands, managerial workers would be less likely to reduce work hours, leading to a weaker negative relation between family time and work time for managers versus non-managers. Considering this logic, I hypothesize the following:

> ***H5****: Occupational level moderates the curvilinear relation between family time and work time such that this relation is weaker for individuals who are in managerial positions than for individuals who are in non-managerial positions.*

Method

Archival Data Source

I used data from the American Time Use Survey (ATUS) covering the time period from 2003 to 2015. The ATUS is an ongoing survey conducted by the U.S. Census Bureau that represents a single-day, time-diary survey of a representative sample of Americans, where data are collected and consolidated through telephone interviews (Bureau of Labor Statistics, 2020b). ATUS respondents are part of a stratified random sample that covers all civilian, non-institutionalized residents living in the U.S. who are at least 15 years of age. They are asked to provide a detailed account of their time spent in different life activities over a 24-hour period

(i.e., from 4 a.m. the day before the interview to 4 a.m. the day of the interview). The ATUS time-diary data include the total amount of time that individuals spend in various activities, covering seventeen broad categories for both paid work and unpaid activities (e.g., childcare, housework, leisure, sleep, etc.). The diary format of the ATUS can inform our understanding of the division of time between family and work because it breaks down the time spent in each domain in detail. Each minute of the day is accounted for in the diary for the relevant 24-hour period, and each minute of time is attached to the specific activity in which the individual was involved. For every activity, the individual is asked the start and stop times, who was present during the activity, and where the activity took place.

Sample

The initial sample included employed individuals with ages between 18 and 65 years (N = 99,677). To capture typical workdays, I excluded participants who were absent from work on the day of the survey (N = 4,197). I also excluded participants whose surveys were gathered on weekends (N = 47,799) and holidays (N = 779) because most individuals usually do not work during weekends and holidays. Finally, I dropped participants who reported zeros on either family time (N= 7,567) or work time (N = 6,039). Essentially, because the study focused on the relation between family time and work time, participants were dropped if they spent no time on either work or family activities on the day of the survey.

The final sample used in the study comprised 33,296 individuals. The average age of participants was 41.57 years (SD = 11.95), and 50.12% of them were female. Diving further into the educational breakdown, 7.52% of the individuals did not have a high school degree, 27.92% of them only had a high school degree, 17.08% of them completed some college but had no college degree, 10.07% of them had an associate degree, 23.89% of them had a bachelor's

degree, and 13.52% of them had a graduate degree. In terms of marital status, 68.28% of participants were married, whereas 31.72% of them were unmarried. Among the 33,296 individuals, 52.56% had no children in the household, whereas 47.44% of them had one or more children in the household. The average number of household children was .89 (*SD* = 1.14). Finally, 10.02% of participants worked multiple jobs, and 12.21% of them had managerial jobs.

Measures

Family time. Family time was measured using the sum of the time spent on "household activities" (category 1) and the time spent "caring for and helping household members" (category 2). Time spent on these activities was measured as a duration in minutes. The first category includes housework, food preparation, household management, and house cleaning. Housework further includes activities like cooking, garden care, pet care, home repair and maintenance, household management, as well as other activities (e.g., balancing a checkbook). The second category includes a range of activities that benefit household members, including caring for and helping household children, activities related to household children's education, activities related to household children's heath, and caring for and helping household adults. This grouping of activities is consistent with previous studies (Barnes et al., 2012; Barnes et al., 2016; Cubas, Juhn, & Silos, 2019; Lee, Cho, Lee, & Han, 2016), which included both housework and caring for household members as family activities.

Work time. Work time was measured using the sum of time spent on "work and work-related activities," which includes the time spent working at a primary job, the time spent working at a secondary job, as well as the time spent in security procedures when at work. Time spent on these activities was measured as a duration in minutes.

Gender. Participants' gender as reported in the survey was coded as 1 for females, and 0 for males.

Occupational level. Occupational level was measured using the occupation codes from the U.S. Census Bureau's Occupation Classification System that are recorded in the ATUS survey. Interviewers use a computer-assisted coding system that displays occupation descriptions and records responses at the time of the ATUS interview, and subsequently assigns an occupation code to each participant. Managerial occupations are those with codes 0010–0430, whereas non-managerial occupations include all the other codes. Occupational level for the study was coded as 1 for managerial occupations, and 0 for non-managerial occupations.

Control variables. Several control variables were included in this study, including age, enrollment in school, and month of data collection. Previous research has shown that age is positively related to work time and family time (Allen & Finkelstein, 2014). At the same time, it has been shown that as people age, they prefer to work fewer hours, with a specific reduction in work hours in years leading up to retirement (Silver, Settels, Schafer, & Schieman, 2019). To control for age, two variables were included (i.e., age and age squared). Logically, people enrolled in school might have less time to work. Thus, I also chose to control for school enrolment status. To control for whether participants were enrolled in school, I used a dummy variable based on participants responses to a question about whether they were enrolled in school. It is noteworthy that participants aged above 49 years were not asked this question in the ATUS, and thus it is assumed those above 49 do not attend any school. Finally, some months may be associated with lower family and work time pressures, whereas others may be associated with higher family and work time pressures. For example, some individuals may have less work in December due to the holiday season, whereas others may have more work when the fiscal year

is ending. Accordingly, I controlled for month of the diary day as well using dummy variables for each month of the diary day. December was taken as the reference month.

Results

Preliminary Analyses

Means, standard deviations, and zero-order correlations for the entire period from 2003 to 2015 are presented in Table 1. As shown, the mean time spent working was 470.13 minutes per day (SD = 152.75), whereas the mean time spent on family activities was 105.60 minutes per day (SD = 99.05). Table 2 presents the mean family time for each year from 2003 to 2015, for the whole sample as well as for women and men separately. Table 3 presents the mean work time for each year from 2003 to 2015, for the whole sample as well as for women and men separately. As shown, women spent significantly more time per day on family activities compared to men (estimate of difference = 33.44 minutes, $p < .001$) for the whole time period from 2003 to 2015. Moreover, women spent significantly less time per day working compared to men (estimate of difference = 46.66 minutes, $p < .001$) for the whole time period from 2003 to 2015.

Table 4 shows regression estimates of linear yearly trends for family time and work time, and sheds light on the descriptive statistics presented in Tables 2 and 3. As seen in Table 4, there has been a gradual and statistically significant decline in family time for women over the years from 2003 to 2015 (b = -1.04, $p < .001$). Over the same period of time, there has been a gradual and statistically significant rise in work time for women (b = .86, p = .02). This means that, for women, family time has decreased, on average, 1.04 minutes per year, whereas work time has increased, on average, .86 minutes per year. For men, there is no significant linear yearly trend for either family time or work time over the studied period of time. Based on these findings, I

decided to include a linear yearly trend and an interaction term between gender and the linear yearly trend in all regression analyses.

Main Analyses

I tested my hypotheses using OLS regression analyses conducted in STATA (Version 17.0; StataCorp, 2017). In all cases, I relied on models that included controls for age, age squared, school enrollment, and month of the year, as well as a linear yearly trend and an interaction term between gender and the linear yearly trend. To account for heteroskedasticity, I used robust standard errors in all regressions. Finally, to ensure that my results are representative of the target population, I used sampling weights in all estimations.

The baseline model included only gender and the control variables (see Model 1 in Table 5). Gender had a significant negative relation with work time (b = -.48.97, p < .001), meaning that women work 48.97 minutes less per day than men, on average. With regard to age, both the linear term (b = 8.81, p < .001) and the squared term (b = -.10, p < .001) were statistically significant. A deeper examination of these effects revealed that each year of increase in age leads to an increase in work time up to the age of 42 years, at which point the effect turns negative and each year of increase in age leads to a decrease in work time. For example, increasing in age from 19 to 20 years old leads to an increase in work time of 4.76 minutes per day, and increasing in age from 29 to 30 years old leads to an increase of 2.68 minutes per day. On the other side of the curve, increasing in age from 49 to 50 years old leads to a decrease in work time of 1.47 minutes per day, and increasing in age from 59 to 60 years old leads to a decrease in work time of 3.55 minutes per day. Moreover, being enrolled in school had a significant negative relation with work time (b = -36.81, p < .001), which means that those enrolled in school worked 36.81 minutes less per day compared to those who were not enrolled in school. Finally, the dummy

variables for month of the year were jointly significant, and the linear yearly trend was significant for women (*estimate* = .93, $p = .01$), but not for men (*estimate* = .35, $p = .36$).

Hypothesis 1 predicted that there is a negative relation between family time and work time. This hypothesis was tested by adding family time as a predictor of work time to the baseline model with gender and control variables (see Model 2 in Table 5). I found that the coefficient on family time was negative and significant ($b = -.57$, $p < .001$). This means that for every minute (hour) more spent on family, work time decreases by 34.20 seconds (minutes). This is consistent with Hypothesis 1.

Hypothesis 2 predicted that there is a curvilinear strengthening relation between family time and work time, such that the negative relation between them becomes stronger as family time increases. This hypothesis was tested by adding a squared term for time spent on family activities to the model with gender, control variables, and family time (see Model 3 in Table 5). The squared term was divided by 100 to rescale its coefficient estimate to fewer decimal places (a procedure that was used for all time predictors involving squared variables). I found that the coefficient on family time squared was negative and significant ($b = -.03$, $p < .001$). To figure out the effect, I plotted how work time changes in relation to 15-minute increments in family time (see Figure 1). Given that the mean value of family time is 105.60 minutes, I chose to focus on intervals around this mean value. For example, I observed that an increase in family time from 15 minutes to 30 minutes per day is associated with a decrease in work time of 6.78 minutes per day, whereas an increase in family time from 90 minutes to 105 minutes per day leads to a decrease in work time of 7.54 minutes per day. Further, when family time increases from 180 to 195 minutes per day, work time decreases by 8.44 minutes per day, and when family time increases from 300 to 315 minutes per day, work time decreases by 9.64 minutes per day.

Overall, there is a strengthening negative relationship such that at higher levels of time spent on family activities, the effect of family time on work time becomes increasingly negative. This is consistent with Hypothesis 2.

Hypothesis 3 predicted that women spend more time on family activities than men. This hypothesis was tested by comparing the mean family time for the subsample of women to the mean family time for the subsample of men. I found that the difference between the two means was positive and significant (*estimate of difference* = 33.44, $p < .001$; see Table 2). This indicates that women spent on average 33.44 minutes more per day on family activities than men, as mentioned earlier. This is consistent with Hypothesis 3.

Research Question 1 asked whether gender moderates the curvilinear relation between family time and work time. This was examined by adding to the set of independent variables in Model 3 an interaction term between gender and family time, as well as an interaction term between gender and family time squared (see Model 4 in Table 5). I found that neither the interaction term between gender and family time ($b = -.04$, $p = .37$) nor the interaction term between gender and family time squared ($b = -.004$, $p = .75$) was significant. This means that when the curvilinear aspect of the relation between family time and work time is accounted for, gender does not play a (further) moderating role. However, I also found that when the relation between family time and work time was assumed to be linear and the curvilinear component was not included (see Model 5 in Table 5), the interaction term between gender and family time was significant ($b = -.07$, $p = .001$), indicating a larger effect for women (*estimate* = -.60) than for men (*estimate* = -.53).

Hypothesis 4 predicted that individuals in managerial jobs spend more time working than individuals in non-managerial jobs. This hypothesis was tested by comparing the mean work

time for the subsample of individuals in managerial jobs to the mean work time for the subsample of individuals in non-managerial jobs. I found that the difference between the two means was positive and significant (*estimate of difference* = 28.54, $p < .001$). The difference remained positive and significant even after accounting for the effects of family time, family time squared, gender, and the set of control variables ($b = 18.07$, $p < .001$; see Model 6 in Table 5). The regression results for Model 6 in Table 5 suggest that individuals in managerial jobs worked, on average, 18.07 minutes more per day than individuals in non-managerial jobs. This is consistent with Hypothesis 4.

Hypothesis 5 predicted that occupational level moderates the curvilinear relation between family time and work time, such that this relation is weaker for individuals who are in managerial positions than for individuals who are in non-managerial positions. This hypothesis was tested by adding to the set of independent variables in Model 6 an interaction term between managerial job and family time, as well as an interaction term between managerial job and family time squared (see Model 7 in Table 5). I found that neither the interaction term between managerial job and family time ($b = -12$, $p = .08$) nor the interaction term between managerial job and family time squared ($b = .005$, $p = .72$) was significant. This is not consistent with Hypothesis 5.

Supplemental Analyses

Supplemental analyses were carried out to understand the impact of family time on work time when slack resources from domains such as sleep or leisure have been depleted or maxed out. I also looked at sleep and leisure as alternate dependent variables to further explore the concept of slack time resources and provide additional insights into relations between time spent in various life domains. For all supplemental analyses, people with zero minutes of sleep time or

zero minutes of leisure time were excluded from the sample, which resulted in a loss of 2,486 observations. Therefore, the remaining sample included 30,810 individuals.

The first model that I tested replicated my main analyses with the smaller sample. As such, I included the same set of indepedent variables as in Model 3 in Table 5 to re-examine the effects of family time and family time squared on work time, parallel to the test of Hypothesis 2 (see Model 1 in Table 6). I found that both the coefficient on family time (b = -.41, p < .001) and the coefficient on family time squared (b = -.05, p < .001) were negative and significant. These results are similar to those reported for the test of Hypothesis 2, confirming the fact that the 2,486 participants with zero minutes of sleep time or zero minutes of leisure time (i.e., the participants not used in the supplemental analyses) are not influential observations.

I then added controls for sleep time, sleep time squared, leisure time, and leisure time squared (see Model 2 in Table 6). If the argument regarding slack time resources holds, then the effect of family time should be stronger when the effects of sleep time and leisure time are taken into account because people will have fewer opportunities to borrow time from those domains when faced with increasing family demands. Consistent with this idea, I found that both the coefficient on family time (b = -.65, p < .001) and the coefficient on family time squared (b = -.03, p < .001) were negative and significant, with the coefficient on family time proving larger than in the previous model. This means that when slack time resources are not available, the negative effect of family time on work time becomes stronger. Of note, both sleep time and leisure time had strengthening negative effects on work time (see Model 2 in Table 6).

Next, I looked at sleep time as an alternate dependent variable, and I tested for the effects of family time and family time squared on sleep time (see Model 3 in Table 6). I found that the coefficient on family time was negative and significant (b = -.05, p = .003), whereas the

coefficient on family time squared was non-significant (b = -.005, p = .23). This means that the effect of family time on sleep time is linear, such that for every minute (hour) more spent on family acitivities, sleep time decreases by 3 seconds (minutes). I then added controls for work time, work time squared, leisure time, and leisure time squared to see how the effect of family time on sleep time changes when individuals cannot borrow time from work or leisure when faced with increasing family demands (see Model 4 in Table 6). I found that the coefficient on family time was negative, significant, and larger in magnitude than in the previous model (b = -.31, p < .001), and that the coefficient on family time squared remained non-significant (b = -.01, p = .05). This means that when slack time resources are not available, the negative effect of family time on sleep time becomes stronger, such that for every minute (hour) more spent on family activities, sleep time decreases by 18.60 seconds (minutes). Of note, both work time and leisure time had strengthening negative effects on sleep time (see Model 4 in Table 6).

Finally, I also looked at the effects of family time and family time squared on leisure time (see Model 5 in Table 6). I found that the coefficient on family time was negative and significant (b = -.32, p < .001), whereas the coefficient on family time squared was positive and significant (b = .04, p < .001). This means that family time has a *weakening* negative effect on leisure time, with the effect turning positive when family time reaches 427 minutes per day. I then added controls for sleep time, sleep time squared, work time, and work time squared to see how the effect of family time on leisure time changes when individuals cannot borrow time from sleep or work when faced with increasing family demands (see Model 6 in Table 6). I found that the coefficient on family time was negative and significant (b = -.52, p < .001), whereas the coefficient on family time squared was positive and significant (b = .01, p < .001), with the coefficient on family time proving larger than in the previous model. This means that when slack

time resources are not available, the negative effect of family time on leisure time becomes stronger. Of note, sleep time had a *weakening* negative effect on leisure time, and work time had a linear negative effect on work time (see Model 6 in Table 6).

Discussion

The purpose of this study was to examine the impact of family time demands on work time, and to explore the moderating roles of gender and occupational level differences on this relation. Overall, I found that family time has a negative relation with work time, and that this negative relation is stronger at higher levels of family time. I also found that employed individuals, on average, spent more time working than carrying out family activities on weekdays (weekends were excluded from the analyses). Moreover, women have continued to spend more time on family activities than have men for each of the studied years, although there has been a small decline, on average, in the gender gap in family time over the 2003-2015 period. Notably, this decrease in the gender gap in family time appears to be offset almost entirely by a decrease in the gender gap in work time. Specifically, family time has been decreasing for women each year by one minute, while work time has been increasing for women each year by almost one minute. In general, most results were consistent with my hypotheses. I discuss each hypothesis in detail below.

The Overall Relation between Family Time and Work Time

Hypothesis 1 predicted that there is a negative relation between family and work time. This hypothesis was based on the resource drain model, and the idea that time spent on family activities and time spent working are competing for the same limited number of hours available, implying that family time should have a negative relation with work time. Consistent with Hypothesis 1, I found that family time has a negative relation with work time. This means that

increases in family time are associated with decreases in work time. More specifically, I found that for every additional minute (hour) spent on family activities, work time decreases by 34.20 seconds (minutes). These results agree with past research that has used ATUS data as well as data collected from other sources (e.g., Barnes et al., 2012; Barnes et.al., 2016; Bhave & Lefter, 2018; Frone et al., 2017; Rothbard & Edwards, 2003).

Hypothesis 2 predicted that there is a curvilinear strengthening relation between family time and work time, such that the negative relation between them becomes stronger as family time increases. This hypothesis was based on the idea that increased demands for family time may also be fulfilled by drawing time from other domains. Initially time may be reallocated from slack time resources, but as these resources become depleted, individuals may have to draw time from the work domain to meet increasing family demands. Thus, when slack time resources become increasingly scarce due to increased time demands from the family domain, the negative effects of family time on work time should become stronger, which results in a nonlinear relation between family time and work time. Consistent with Hypothesis 2, I found that family time has a negative strengthening relation with work time. This means that at higher levels of family time, the effect of family time on work time is increasingly negative. These results are similar to findings of Barnes et al. (2012), who observed that family time has a curvilinear relationship with sleep time, whereby individuals facing increasing family time demands have been shown to draw time at an increasing rate from sleep to fulfill those demands. In both cases, it appears that individuals draw greater time from the other domain to meet increasing family demands. I interpret this to be consistent with the idea that there is a lack of available of slack resources at higher levels of family time.

Gender Differences

Hypothesis 3 predicted that women spend more time on family activities than do men. This hypothesis was based on the idea of social norms, which suggest that women are likely to dedicate more time to family and to have a stronger preference for family over work as compared to men. Norms about women dedicating greater time to family than to work have been consistent over the past decades (Cerrato & Cifre, 2018; Lachance-Grzela & Bouchard, 2010). Consistent with Hypothesis 3, I found that women spent more time on family activities than men for all years from 2003 until 2015. These results agree with previous research that points to women devoting greater time to family activities than men using ATUS data (Bhave & Lefter, 2018; Bianchi et al., 2000; Gurley-Calvez et al., 2009) as well as other data sources (Galinsky et al., 2005; Shockley et al., 2017). As discussed before, women have continued to spend more time on family activities than have men for each of the studied years, but family time for women has been decreasing over the years, whereas work time for women has been increasing over the same period. The decrease in the gender gap in family time appears to be offset almost entirely by the decrease in the gender gap in work time.

I also put forward a research question that asked whether gender moderates the curvilinear relation between family time and work time. This question was prompted by the idea that the previously documented gender moderation of the relation between family time and work time (Rothbard & Edwards, 2003) may actually have been masking the curvilinear relation between family time and work time. Given that women spend more time engaged in family demands, they are more likely to be on the higher end of the curve discussed before. Being on the higher end of the curve would then mean that the relation between family and work time would be more negative for women compared to men. I found that gender did not moderate the

curvilinear relation between family time and work time. In other words, both men and women, when faced with increasingly high demands in the family domain, experience similar effects of family time on work time. However, when looking at the linear model, gender did moderate the relation between family time and work time, with a greater decrease in work time for women compared to men given the same increase in family time. This was in line with previous studies that found a moderating impact of gender (e.g., Rothbard & Edwards, 2003).

Occupational Level Differences

Hypothesis 4 predicted that individuals in managerial jobs spend more time working than individuals in non-managerial jobs. This hypothesis was based on the idea that managerial level jobs have higher work time demands due to their higher commitments and responsibilities, as well as higher stakes in terms of negative perceptions of employers and increased competition with other colleagues for promotions (Duxbury et al., 1994; Higgins et al., 2000). Consistent with Hypothesis 4, I found that people in managerial level jobs spend greater time working than those in non-managerial jobs. This was consistent with past research showing that individuals in managerial jobs dedicate more time to work than individuals in non-managerial jobs (e.g., Higgins et al., 2000).

Hypothesis 5 predicted that occupational level moderates the curvilinear relation between family time and work time, such that this relation is weaker for individuals who are in managerial positions than for individuals who are in non-managerial positions. This hypothesis was based on the idea that even when they experience increasing family time demands, managerial workers will be less likely to reduce work hours, leading to a weaker negative relation between family time and work time for managers versus non-managers. In contrast to Hypothesis 5, I found that occupational level did not moderate the relation between family time

and work time. No past studies have tested for this moderation. The lack of evidence for the moderating role of occupational level might be explained by the fact that family time demands and personal preferences shift as one progresses over their career, with individuals' priorities changing despite the fact that stakes might be higher at top levels of the hierarchy for giving up work time to allocate additional time to family. Alternatively, it is possible that family time demands faced by individuals at different levels of the hierarchy are not that different, and that people respond similarly to meet those demands regardless of where they stand on the organizational hierarchy. Finally, another explanation might be that individuals in managerial positions have more flexibility over their work schedules, which makes it possible for them to meet the higher expectations associated with their jobs even when they are forced to reduce their work time in response to increased family time demands.

Supplemental Analyses

As discussed initially, individuals are likely to take from slack resources when such resources are available, but they may draw from the work domain when the slack is depleted. In the supplemental analyses, other prominent domains including sleep and leisure were examined to explore their role in how increasing family time impacts work time.

In the sub-sample of participants with non-zero sleep time and non-zero leisure time, I found that the effect of family time on work time was very similar to the corresponding effect observed in the full sample. Moreover, after controlling for sleep time and leisure time, the effect became stronger, suggesting that the negative relation between family time and work time is stronger when slack time resources that may have been present in sleep and leisure are used up, and little leeway remains to draw time from those domains. Based on these results, it appears that people draw more from work to meet increasing family demands when time from other domains

is not available. This provides support to the idea of slack resources, and shows that when time allocated to other domains is depleted, individuals have no other option but to draw greater time resources from the work domain.

I also found that increases in family time are associated with decreases in both sleep time and leisure time, suggesting that sleep are leisure are additional domains from which individuals draw time to meet increased family demands. Based on the magnitudes of the observed effects, it appears that the strongest time-based conflict is between family and work, followed by family and leisure, and then family and sleep. Moreover, the negative effect of family time on sleep time is stronger when leisure time and work time are controlled for, as is the negative effect of family time on leisure time when sleep time and work time are controlled for. These results are in line with slack resources theory, and show that when there are no options to borrow time from other domains, people will draw time from leisure and sleep to meet increased family demands.

Strengths and Limitations of the Study

Using data from the ATUS was a strength of this study as they provide a detailed account of individuals' life activities over a 24-hour period (i.e., from 4 a.m. the day before the interview to 4 a.m. the day of the interview). The ATUS time-diary data break down various activities into seventeen broad categories for both paid work and unpaid activities (e.g., childcare, housework, leisure, sleep, etc.). As such, the data provide a well rounded insight into the time allocation decisions of each individual, accounting for each minute of the day. Furthermore, the data provide many details about individuals' personal and situational characteristics (e.g., age, education, school enrolment status, occupational level, etc.). This said, it could be helpful to expand the measures of family time and work time, as I selected variables in the data set that I found most relevant, but there could be others that would be worthy of consideration. Further

breakdown of the activities under family time that constitute the greatest portion of an individual's time could also be explored further. Another strength of this study is that the ATUS data include a very large sample that is representative of the population of workers.

In terms of limitations, reverse causality is a serious concern because this was a cross sectional, correlational study design. As a result, it is impossible to know for sure whether increases in family time cause decreases in work time and/or whether increases in work time lead to decreases in family time. A second limitation is that there could be relevant variables that have not been accounted for, such as the nature of work (flexible or rigid) or personality traits (e.g., coping styles), and the omission of these variables may have caused a spurious relation between family time and work time. Moreover, other variables such as number of children and marital status could have been included as additional controls, but I decided not to control for these variables to avoid removing relevant variation in family time.

Directions for Future Research

It can be useful to assess the impact of family time on work time in different countries as this sample focused specifically on U.S. households, but it seems reasonable to suggest that cultural values and trends might also impact time allocation decisions. In some cultures, where women are not encouraged to pursue a career and are considered more as being homemakers, the time allocation decisions and dynamics could be different than in cultures where both men and women are encouraged to pursue a career.

Another potential factor that may moderate the relation between family time and work time that could be considered in future research is whether being a married parent or a single parent has a different impact on work time when faced with increased family time demands. Single parents experience greater work-to-family conflict than married parents (Byron, 2005).

Further, an individual's level of family time is likely to be influenced by the work hours of their spouse, as the spouse's contribution to family demands can also impact an individual's slack time available to cater to other domains. Past research has shown that married women with husbands spend less time on weekday childcare because fathers are available to share childcare responsibilities (Kimmel & Connelly, 2007). Moreover, past studies have found that women are more responsive to their spouses' work hours as compared to men (Garcia-Roman & Cortina, 2016). Further, there is evidence that single parents face more family-to-work conflict than parents in two-parent families (Reimann et al., 2019). Thus, an important area for further research could be to explore the moderating role of spousal work hours, or of the presence of a spouse in the household, and whether there are gender differences in these effects. One speculation is that the curvilinear relation between family time and work time would be steeper for single parents as compared to those who have a partner.

It would also be worthwhile to investigate further the differences in family time and work time at managerial and non-managerial levels, and whether other factors are impacting these differences. The moderating impact of occupational level was not supported in this study, but interviews with managerial and non-managerial employees could provide greater insight as to why the relation between family time and work time shows no difference between managerial and non-managerial employees. This could be a fruitful avenue for future research.

Lastly, it would be interesting to explore the impact of family time on work time using a longitudinal design to see whether there are differing impacts of family time on work time at different stages in life and as household incomes change. For example, individuals may be more inclined to dedicate more time to family at later stages in life when their incomes are higher.

Studying changes in individuals' time allocations year over year could provide further insight into changing dynamics of personal and professional progression in life.

Practical Implications for Individuals and Organizations

This study provides a better understanding of how family and work time demands impact each other. Although previous research has focused on both work-to-family conflict and family-to-work conflict, not much research has explored the impact of family time on work time, and whether the relation is solely linear or a curvilinearity aspect is present as well. The results of this study show that a curvilinear relation does exist. They also provide further insights into the role of slack resources, and elaborate on how time resources are utilized when all other resources have been exhausted. Several practical implications can be gathered from this study.

First, I found that individuals who spend a lot of time on family activities will reduce their work time, and this effect was seen to be stronger when they have no other temporal resources left in other domains. Thus, when individuals are faced with low slack resources, they have no choice but to take away resources from core domains (e.g., work) to meet demands in other core domains (e.g., family), and this can leave less time to fulfil demands and responsibilities that are faced at work. If family time increases lead to work time decreases, this can be detrimental to the extent that it may threaten an individual's means of earning a living if their employer's expectations and perceptions are negatively impacted by the employee reducing their work time. This may be particularly relevant to hourly workers because their pay and performance are dependant on the amount of time they spend working.

Second, my results also provide support for the availability of flexible work schedules, as they have been shown to lead to fewer conflicts in work and family domains. Indeed, these flexible schedules result in a reduction in job-related stress due to increased work time demands,

and individuals with flexible job schedules have less conflict between work and family (Byron, 2005). This recommendation would apply to both genders because both face a strengthening negative relation between family time and work time. It is worth remembering, however, that women still spend more time on family activities than do men, and therefore are more likely to be on the higher end of the curve. Although there has been a gradual change in family time and work time for women over the years, there is still more that needs to be done to increase gender egalitarianism when it comes to managing family demands.

Third, this study will help individuals better understand their daily experiences at the work-nonwork interface, and become more aware that higher demands from either the family or the work domain can have an impact on time management in the other domain. It also highlights that as individuals move up the organizational hierarchy, their experiences of how their family time demands would impact their work time may remain the same.

Conclusion

This study examined the relation between family time and work time. I found that the relation between family time and work time is curvilinear, with the impact of family time on work time being greater at higher levels of family time demands. This points to the likelihood that slack time resources are an important determinant of how time demands in one domain might impact time allocation to another domain. When time re-allocation from other domains is no longer possible because slack time resources in those are diminished, individuals have to reduce time in the work domain to meet increased family time demands. I also found that the gender moderation discussed in previous studies may be explained by this curvilinear relation between family time and work time, although the gender moderation remained present when looking at the linear relation between family time and work time. It was further shown that there

is no evidence of a moderating effect of occupational level on the relation between family time and work time, and that managerial and non-managerial individuals may face similar struggles when dealing with increased family time demands. My results expand our knowledge of how time allocation across family and work domains has evolved over the past few decades, with women decreasing their time allocation to family and increasing their time allocation to work, and men experiencing no change in work or family time over the studied period.

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Table 1. Descriptive Statistics and Bivariate Correlations

	Mean	*SD*	1	2	3	4	5
1. Gender	.50	.50					
2. Age	41.57	11.95	0.01				
3. In school	.06	.24	0.05**	-0.28**			
4. Managerial job	.12	.33	-0.07**	0.07**	-0.03**		
5. Family time	105.60	99.05	0.17**	-0.01*	-0.05**	-0.02**	
6. Work time	470.13	152.75	-0.15**	0.03**	-0.09**	0.06**	-0.37**

Notes. $N = 33{,}296$. Gender coded as follows: 1 = female, 0 = male. In school coded as follows: 1 = enrolled in school, 0 = not enrolled in school. Managerial job coded as follows: 1 = managerial job, 0 = non-managerial job. Time variables are in minutes. All estimations include sampling weights. $*p < .05$; $**p < .01$ (two-tailed).

Table 2. Yearly Trends in Family Time by Gender

	Overall sample	Subsample of women	Subsample of men	Difference between subsample means
Year	*Mean*	*Mean*	*Mean*	*Estimate*
2003	110.03	129.99	89.90	40.08**
2004	109.15	127.01	91.33	35.68**
2005	106.57	124.07	89.12	34.95**
2006	103.49	120.24	86.48	33.76**
2007	111.07	129.41	93.18	36.24**
2008	107.02	125.09	89.17	35.91**
2009	107.54	122.43	92.79	29.64**
2010	106.60	121.98	90.66	31.33**
2011	104.02	120.71	87.11	33.59**
2012	102.04	119.61	84.21	35.40**
2013	104.19	119.47	89.21	30.26**
2014	101.09	114.61	87.13	27.49**
2015	100.22	115.67	84.52	31.15**
2003–2015	105.60	122.28	88.84	33.44**

Notes. $N = 33{,}296$. Family time is in minutes. All estimations include sampling weights.
$*p < .05$; $**p < .01$ (two-tailed).

Table 3. Yearly Trends in Work Time by Gender

	Overall sample	Subsample of women	Subsample of men	Difference between subsample means
Year	*Mean*	*Mean*	*Mean*	*Estimate*
2003	467.53	441.57	493.72	-52.15**
2004	471.19	444.32	497.99	-53.67**
2005	466.44	443.26	489.56	-46.30**
2006	471.42	446.56	496.65	-50.08**
2007	470.54	447.83	492.69	-44.87**
2008	467.03	443.80	489.98	-46.18**
2009	468.91	446.69	490.91	-44.22**
2010	465.28	444.44	486.87	-42.43**
2011	465.98	442.99	489.27	-46.28**
2012	471.34	445.33	497.73	-52.40**
2013	471.80	447.96	495.18	-47.23**
2014	480.70	460.33	501.71	-41.38**
2015	473.21	453.03	493.71	-40.68**
2003–2015	470.13	446.85	493.51	-46.66**

Notes. $N = 33{,}296$. Work time is in minutes. All estimations include sampling weights.
$*p < .05$; $**p < .01$ (two-tailed).

Table 4. Regression Results for Linear Yearly Trends

	Family time	Work time
Overall sample	-.71**	.51
Subsample of women	-1.04**	.86*
Subsample of men	-.39	.20

Notes. $N = 33{,}296$. Time variables are in minutes. All estimations include sampling weights.
$*p < .05$; $**p < .01$ (two-tailed).

Table 5. Regression Results for Study Variables

	Dependent variable: Work time						
Predictors	*Model 1*	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*	*Model 7*
Gender	-48.97**	-26.30**	-27.30**	-21.76**	-18.86**	-26.59**	-26.54**
Age	8.81**	12.11**	11.92**	11.96**	12.15**	11.69**	11.66**
Age squared	-.10**	-.15**	-.14**	-.14**	-.15**	-.14**	-.14**
In school	-36.81**	-48.44**	-48.06**	-48.22**	-48.64**	-47.98**	-47.88**
Family time		-.57**	-.44**	-.41**	-.53**	-.44**	-.42**
Family time squared/100			-.03**	-.03**		-.03**	-.03**
Gender*Family time				-.04	-.07**		
Gender*Family time squared/100				-.004			
Managerial job						18.07**	29.27**
Managerial job*Family time							-.12
Managerial job*Family time squared/100							.005
R^2	.04	.17	.17	.17	.17	.18	.18
Change in R^2		.13	.002	<.001	.001	.002	<.001
Comparison model for change in R^2		Model 1	Model 2	Model 3	Model 2	Model 3	Model 6

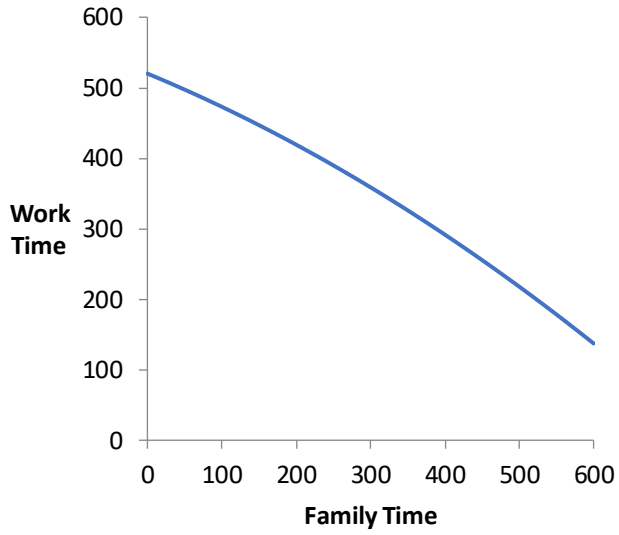
Notes. N = 33,296. Gender coded as follows: 1 = female, 0 = male. In school coded as follows: 1 = enrolled in school, 0 = not enrolled in school. Managerial job coded as follows: 1 = managerial job, 0 = non-managerial job. Time variables are in minutes. All models include dummy variables for month of the year (the omitted category is December), a linear yearly trend, and an interaction term between gender and the linear yearly trend. All estimations include sampling weights. $*p < .05$; $**p < .01$ (two-tailed).

Table 6. Regression Results for Supplemental Analyses

	Dependent variables					
	Work time		Sleep time		Leisure time	
Predictors	*Model 1*	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*
Gender	-26.85**	-24.73**	13.33**	.10	-8.59**	-15.63**
Age	11.57**	4.72**	-4.27**	-2.23**	-6.07**	-2.44**
Age squared	-.14**	-.06**	.04**	.02**	.08**	.03**
In school	-49.94**	-67.32**	-19.79**	-40.44**	-9.92*	-40.52**
Family time	-.41**	-.65**	-.05**	-.31**	-.32**	-.52**
Family time squared/100	-.05**	-.03**	-.005	-.01	.04**	.01**
Sleep time		-.27**				-.53**
Sleep time squared/100		-.04**				.01**
Leisure time		-.57**		-.27**		
Leisure time squared/100		-.02**		-.02**		
Work time				-.29**		-.43**
Work time squared/100				-.01**		-.003
R^2	.19	.51	.03	.26	.05	.36
Change in R^2		.32		.23		.31
Comparison model for change in R^2		Model 1		Model 3		Model 5

Notes. N = 30,810. Gender coded as follows: 1 = female, 0 = male. In school coded as follows: 1 = enrolled in school, 0 = not enrolled in school. Time variables are in minutes. All models include dummy variables for month of the year (the omitted category is December), a linear yearly trend, and an interaction term between gender and the linear yearly trend. All estimations include sampling weights. $*p < .05$; $**p < .01$ (two-tailed).

Figure 1. Effect of Family Time on Work Time



Notes. $N = 33{,}296$. Time variables are in minutes. The plot is based on the coefficient estimates from Model 3 in Table 5.