



Presence of supportive social networks, demanding working time schedules and work-life balance

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Increasing Resilience in European Families

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Introduction

Globalization and technological change have led to profound transformations in the European labour markets, which made the working time schedules of many individuals more demanding and difficult to manage (Piasna, 2018). Many workers are increasingly expected to be available beyond standard working hours to swiftly address global market challenges and accommodate time zone differences (Korunka and Kubicek 2017, Riekhoff et al., 2021). They are also increasingly required to update skills and knowledge to the continuously changing circumstances (Ra et al 2019). Additionally, deregulation reforms aimed at enhancing workforce flexibility for employers have further strained working time schedules. These reforms have led to a proliferation of precarious employment contracts (Eurofound, 2017; Blossfeld and Mills, 2010; St-Denis and Hollister, 2013), making it more difficult for individuals to secure stable jobs and organize working time around family obligations. While some workers have benefited from increased work autonomy and flexibility, allowing them to better tailor their work schedules to personal needs, this is only the case of specific occupations and in few countries (Lopes et al., 2014; Anttila et al., 2015).

These growing demands on workers' time schedules have likely intensified the conflict between paid work and personal life, especially among dual earner couples with care responsibilities. Studies show that parents who work non-standard working hours (Lambert et al., 2023; Taiji and Mills, 2019; Laß and Wooden, 2022) and those who work long hours (Tammelin et al., 2017; Minnotte, 2012) experience higher levels of work to family conflict than parents with standard work schedules. Such experiences of conflict can have numerous negative consequences for parents and children, particularly for mental health (Dinh et al., 2017; Vahedi et al 2019). In their pursuit of resilience, families thus navigate the competing demands of professional and family life by leveraging available resources to maintain their well-being.

Past research has demonstrated that childcare support is an important resource parents utilise in order to navigate the competing demands of professional and family life. Much of the past research focused on formal childcare (Borgmann et al., 2019; Steiber, 2009) though some studies also underlined the role of social networks in mitigating the negative effects of work-time demands. It was demonstrated that informal childcare plays a particularly important role when the opening hours of formal childcare institutions do not match parental working time and when there is a need to handle unexpected challenges (Brady 2016; Gambaro et al 2024). Furthermore, it was shown that support with childcare significantly reduces parental stress (Craig and Churchill, 2018), improves subjective well-being (Ryser and Heers, 2022) and increases satisfaction with work-life balance (Arpino and Luppi, 2020). Informal childcare support may thus be helpful in situations in which parents work evenings or face the unexpected need to extend their working hours as it provides flexibility and reliability that formal childcare arrangements cannot offer. Despite this fact, to the best of our knowledge, no studies have so far addressed the role of informal childcare.

There has been research on the role of the welfare state policies and workplace cultures for mitigating the negative effect of work-time demands on work-family conflict (Stewart et al., 2023; Nayak and Pandey, 2022), but the moderating role of social networks has not been examined in this context.

In this study, we fill this research gap and investigate the perceived availability of informal childcare support in mitigating the effect of work-time demands on work-to-family conflict (WFC). To this end, we use three waves (6, 8, and 10, collected between 2013 and 2018) of the Panel Analysis of Intimate Relationships and Family Dynamics (PAIRFAM). Our sample includes mothers and fathers in dual-earner different sex couples with at least one child aged 10 or below, followed for at least two waves. We focus on three measures of work-time demands, namely actual work hours, perception of time pressure in the job, and evening work (i.e., after 7 p.m.). We consider four major sources of familial and non-familial support (i.e. grandmothers; grandfathers; other family members; friends and neighbours) in providing assistance with childcare.

We find that work-time demands significantly increase WFC for both mothers and fathers, with varying effects by gender. Working in the evening among mothers is associated with higher levels of WFC. Among fathers the effect of work hours is weaker than among mothers, but instead we find time pressure to amplify fathers' (but not mothers') WFC. Social support moderates these effects and this moderating effect is again different for mothers and fathers: grandmothers' support notably alleviates WFC for mothers across all measures of work-time demands, whereas fathers benefit more from support by other family members and friends, especially in managing time pressure.



Theoretical background and hypotheses

Work-Time Demands: A Source of Work-to-Family Conflict

The theoretical framework of this study builds on role theory. It posits that individuals fulfil multiple roles in their lives, whereby a role is a set of expectations defined by others that outline how it should be performed, imposing specific demands on those fulfilling it (Biddle, 1986). As individuals have multiple roles, the demands in one role can interfere with the demands in other roles (Kossek and Lee, 2017). This happens if the demands in one role do not leave enough time to fulfil the demands in other roles, or due to an overlap in the time when activities in different roles need to be performed (Hecht, 2001).

Role theory provides a foundational framework for understanding work-family conflict, which emerges when individuals face competing demands from their professional and familial responsibilities. Indeed, past studies consistently show that higher work-time demands are significantly associated with work-to-family conflict. Long work hours, which translate into fewer hours available to fulfil family responsibilities, are associated with higher levels of work-family conflict (Adkins and Premeaux, 2012; Tammelin et al., 2017; Gallie and Russell, 2009; Minnotte, 2012). Furthermore, perceptions of work-time pressure heighten feelings of being overwhelmed, contributing to the perception of work-to-family conflict (Minnotte, 2012; Tammelin et al., 2017). Working outside of the standard working hours (i.e. Monday to Friday, from 9am to 5pm) also impacts the experience of work-to-family interference. It interferes with the time traditionally considered as 'family time' (Lambert, 2023) and usually does not match the opening hours of formal childcare. Notably, studies have shown a positive association between non-standard work hours and work-to-family conflict in various country contexts (Gallie and Russell, 2009; Taiji and Mills, 2019; Laß and Wooden, 2022).

The Effect of Work-Time Demands on Work-To-Family Conflict: A Gender Perspective

The effect of work time demands on work-to-family conflict is particularly prominent for dual-earner parents, who must balance the work demands of both partners along with childcare responsibilities (Nomaguchi, 2009). Nevertheless, the impact of these demands can differ by gender. In different-sex couples, mothers are traditionally cast as primary caregivers (Olah et al 2018). As a result, following the birth of a child, women are often expected to adjust their work hours and job responsibilities to accommodate family needs (Baxter et al., 2015). This expectation leads to women spending considerably more time on housework and childcare activities compared to their male counterparts (Garcia-Mainar et al., 2011; Craig and Mullan, 2011; Argyrous and Rahman, 2017), while reducing their time in paid employment (Steiber et al., 2015).

These gendered differences in childcare also extend to the type and timing of activities. Mothers are typically involved in routine activities (e.g. preparing meals, nursing children), which are repetitive and cannot be easily postponed, while fathers are more involved in occasional recreational activities (McDonnell et al., 2019). Involvement in routine tasks results in mothers being considerably more involved in housework and childcare in the afternoon (i.e. between 4 and 10 pm), which is the peak time of regular household demands (Craig and van Tienoven, 2021), such as preparing dinners or putting children to bed. Consistently, previous research finds that work during non-standard hours (e.g. evenings) increases work-family conflict more strongly for mothers than fathers (Lambert et al., 2023).

This traditional division of labour remains prevalent in Germany, where after the birth of their first child, women typically reduce their participation in paid employment (Steiber et al., 2015). Full-time employment rates among mothers drop sharply, while part-time employment rates rise significantly (Fitzenberger et al., 2013). Additionally, over the past two decades, the division of childcare in Germany has seen little change; mothers still account for three-quarters of total childcare time during weekdays and nearly two-thirds on weekends (Steinbach and Schulz, 2022).

At the same time, while mothers are perceived as main caregivers, men are seen as main breadwinners. These societal expectations might lead men to prioritize work responsibilities over family obligations, resulting in them taking on jobs with higher workloads and longer working hours. Germany is not different in this respect. Even though men's involvement in the housework has slightly increased over the last decades, they spend more hours in paid employment and contribute considerably more to the share of household income compared to women (Procher et al., 2018). Consequently, both work hours and time pressure can have a more pronounced effect on fathers' WFC (van Veldhoven and Beijer, 2012). Studies indeed show that workload (i.e. work demands in terms of volume and speed) is associated with a higher WFC for dual-earner fathers compared to dual-earner mothers (Van Veldhoven and Beijer, 2012).

All this leads us to the formulation of the following hypotheses. First, we expect to find that mothers and fathers who face higher work-time demands (i.e. evening work, work hours and work-related time pressure) experience higher levels of WFC (H1). However, given traditional gender roles, we anticipate that evening work will affect mothers more than fathers due to mothers' greater involvement in routine childcare tasks during peak household hours (H1a), while long work hours (H1b) and work-related time pressure (H1c) will have a greater impact on fathers' WFC, as fathers are still expected to be loyal and committed employees whose work is not affected by family obligations (Kelland et al., 2022).

Social Support: Moderating the Effect of Work-Time Demands on Work-to-family conflict

Conservation of Resources Theory (COR) highlights the role of social support in managing experiences of conflict (Hobfoll and Stokes, 1988). COR posits that individuals seek to minimize loss of resources, which include tangible assets, personal characteristics, conditions, or energies that are valued. As demands can lead to a depletion of resources, the model predicts that people will strive to minimize demands. One way of minimizing demands is by making use of social support (Hobfoll et al., 1990), which stems from social relations that can provide either instrumental or emotional assistance (Hobfoll and Stokes, 1988). In line with COR, when faced with conflicting demands, workers can reduce conflict by relying on the social support networks



available to them. Consequently, social support can moderate the effect of work demands on WFC.

A large number of studies have found a direct effect of social support on WFC. Studies found that workplace support from employers, supervisors or coworkers (Selvarajan et al., 2013; Elliott, 2003; van Daalen et al., 2003; Griggs et al., 2013; Blanch and Aluja, 2012) as well as support from partners, relatives and friends (Irak et al., 2020; Adams and Golsch, 2021; Amah, 2021; Griggs et al., 2013) are associated with lower levels of WFC. However, the literature that investigates the role of social support in mitigating the effect of work-time demands on WFC is scarce. Nasurdin and O'Driscoll (2011) investigated the role of organizational support in reducing the effect of work overload on WFC among academic staff working in public universities in New Zealand and Malaysia. They did not find evidence of a moderating effect. Similarly, Stewart et al. (2023), investigated the moderating effect of organizational and supervisor support in reducing the effect of exceptional care demands (i.e. caring for children with a chronic illness or emotional or developmental problems) on WFC using a sample of working parents from the USA. They also found no evidence of a moderating effect. At the same time, Nayak and Pandey (2022) used a sample of women employees in Jharkhand to investigate the moderating effect of family-friendly policies on the link between perceived work demands on WFC. They found that leave benefits and dependent care benefits mitigate the negative effects of perceived work demands.

However, the literature is missing studies that consider the moderating effect of social support on the relationship between work-time demands and WFC. In the context of demanding work schedules, informal childcare plays an important role in enabling parents, particularly mothers (Argyrous and Rahman, 2017), to balance their work schedules with their children's needs. Studies show that mothers who work long hours (Folk and Yi, 1994) and those with non-standard work schedules (Richardson et al., 2023) rely on informal childcare providers to reconcile work and care demands. Mothers and fathers who receive support with childcare from their families or friends experience considerably lower parental stress (Craig and Churchill, 2018), while support from grandparents is associated with higher levels of subjective well-being (Ryser and Heers, 2022). For mothers, support from family and friends is also associated with higher levels of satisfaction with work-life balance (Arpino and Luppi, 2020).

Based on these considerations we expect that perceived social support in the form of help with childcare moderates the effect of work demands on WFC (H2). However, given the disproportionate childcare responsibilities mothers bear, perceived availability of help with childcare might alleviate the effect of evening work (H2a), work hours (H2b) and work-related time pressure (H2c) on WFC more for mothers than for fathers.



Methodology

Dataset selection

Examining the effects of work-time demands on WFC, while accounting for the moderating effect of social support, requires access to a complex dataset. The dataset should encompass detailed information on work time, measures of WFC and various forms of social support, along with demographic and socioeconomic variables. Consequently, in the first step we considered numerous datasets, national panel datasets as well as pan-European datasets, in order to check their suitability for our research purposes. We identified three datasets which potentially included the variables needed and have been already employed in previous studies on WFC or social networks. These datasets are: Panel Analysis of Intimate Relationships and Family Dynamics (PAIRFAM), initially planned for our study (as declared in the project proposal), the German Socio-Economic Panel, as well as the European Social Survey. In a second step we assessed the availability of our variables of interest in each data. Additionally, we considered the type of dataset (i.e. cross-sectional or panel) and the time period it covers. Table 1 summarizes the characteristics of each dataset.

The European Social Survey (ESS) is a biannual cross-national survey established in 2001, aimed at measuring the attitudes, beliefs, and behaviour patterns of diverse populations in Europe. It covers over 30 countries, including EU member states and neighbouring nations. The ESS collects detailed information on experiences of work/family interference and demanding work schedules. Regarding the demanding work schedules, it includes how often both respondents and their partners work evenings, nights, weekends, or have to work overtime at short notice. Nevertheless, the ESS provides information on the household structure, by identifying the relationship each household member has with the respondent. This, however, provides only information on the availability of intrahousehold support and does not include external social networks. Additionally, the variables of interest are available in only two of the earliest waves (i.e. 2004; 2010), which might limit their current relevance.

The German Socio-Economic Panel (GSOEP) is a longitudinal survey that has been conducted annually since 1984. It covers a representative sample of households across the country, tracking individuals and families over time to study social and economic changes. The GSOEP includes detailed variables on demanding work schedules for both respondents and their partners. This encompasses evening and night work, weekend work, and overtime work. It includes more extensive data on social support than ESS, providing information on the presence of close and extended family members and their proximity to the respondent's household. Nevertheless, GSOEP lacks specific questions on work-family interference.

Lastly, The Panel Analysis of Intimate Relationships and Family Dynamics (PAIRFAM) is an annual longitudinal study initiated in 2008, designed to investigate the complexities of intimate



relationships and family life in Germany. It tracks a representative sample of anchor persons (i.e. main respondents), their partners, children, as well as their parents. PAIRFAM includes detailed questions on work-family interference. In terms of work schedules, PAIRFAM collects data on work hours, time pressure in the job and evening work, though it lacks information on the partner's work schedule, which is a notable limitation. However, PAIRFAM provides detailed data on social support, including questions on aid in emergencies concerning childcare.

To summarize, ESS offers a broad coverage of countries, but provides more limited detail on work schedules and social support than the remaining two data sources. The ESS data which contain the necessary information come from 2004 and 2010 and thus are also quite outdated. GSOEP provides detailed variables on work schedules and social support data, but lacks questions on work and family interference. PAIRFAM is the only dataset which provides information on respondent's work schedules, work-family interference and social support networks, i.e. information which is crucial for our study. The disadvantage of PAIRFAM is that it misses information on the partners' work schedules. Despite this limitation PAIRFAM provides most complete information required by our study and thus we decided it is the best option possible.

Table 1. Variable availability

Criteria	ESS	GSOEP	PAIRFAM
WFC	Yes	No	Yes
Respondent's work	Work hours Weekend work Evening work Overtime work	Work hours Weekend work Evening work Night work Overtime work	Work hours Time pressure Evening work
Partner's work	Work hours Weekend work Evening work Overtime work	Work hours Weekend work Evening work Night work Overtime work	Work hours
Supportive social networks	Household structure	Distance to various family members	Aid in emergency concerning childcare
Dataset Type	Cross-sectional (2004; 2010)	Panel* (2006-2016)	Panel* (2013-2018)

Notes: *The data for the variables of interest is not continuously available during this period.



Sample

We use data from the PAIRFAM waves 6, 8, and 10 (2013-2018), which include all our variables of interest. PAIRFAM provides detailed data on the employment of anchor persons (i.e., main respondents) and, to a lesser extent, on their partners' employment. Our sample consists of working mothers and fathers in dual-earner households who are followed for at least two waves. We focus on parents with at least one child aged 10 or younger, as they are more likely to require childcare support in emergencies. Notably, the variable on childcare support in case of emergencies is only available for parents with young children. Our final sample includes 313 anchor mothers (N-observations: 751) and 249 anchor fathers (N-observations: 600).

The descriptive characteristics of the sample are presented in Appendix 1. The average age of mothers is 37.7 years, while the mean age of their partners is 43.4 years. The mean age of the youngest child is approximately 5.37 years, with an average of 1.49 children aged 10 or below. The majority of the mothers work part-time (67.6%), with an average of 31 hours worked per week, while their partners work full-time (93.8%), with an average of 43 hours per week. The sample of fathers is relatively similar to the sample of mothers in terms of age (39 years on average), their partner's age (37 years), the age of the youngest child (5.30 years), and the number of children (1.48). Fathers tend to work full-time (92.3%) with an average of 42 hours per week, while their partners work part-time (61.2%) with an average of 29 hours worked per week.

Variables

Outcome variable

We focus on time-based WFC, which arises when the time demands of one role restrict the amount of time that can be spent on another one (Voydanoff 2005, Steiber 2009). In order to assess the time-based WFC we make use of the statement: "Due to my professional, vocational training, or university workload, my personal life suffers" with which respondents could agree or disagree using a 5-point Likert scale (1 = not at all; 5= absolutely).

Work-time demands

Work-time demands are measured using three distinct variables. We construct a categorical variable on the number of hours worked per week. Given the large difference between mothers and fathers, we define different categories of work hours. For mothers we distinguished between: a. 29 hours or less; b. 30-39 hours and c. 40 hours or more, while for fathers we distinguish between: a. 39 hours or less; b. 40-49 hours and c. 50 hours or more. Time pressure was assessed using the statement: "I often have to work under extreme time pressure" (1= disagree completely, 5= agree completely), which we use as a continuous variable in our models. Lastly, evening work is measured using the question: "Do you frequently work after 7 p.m.?", based on which we defined a dummy variable (0 = no, 1 = yes).

Supportive networks

To measure the perception of the availability of social support with childcare, we use answers to the question: 'Who could come to your aid in an emergency involving your child's daycare?'. Respondents have the possibility of selecting multiple sources of support both from within the family and outside of it. Based on this, we create four dummy variables, related to four types of sources of support: i) grandmothers (i.e. mother/stepmother or partner's mother/stepmother), ii) grandfathers (i.e. father/stepfather or partner's father/stepfather), iii) other family members



(i.e. daughter/stepdaughter, son / step son, partner of a child/stepchild, sister / step sister, sister / step sister, partner of brother or sister, partner's siblings, grandparents, other relatives) and iv) 'friends and neighbours' (i.e. female friend, male friend, neighbour). Each variable takes the value of 1 if the respondents mentioned any source of support that fell into the particular type of support to which the dummy variable refers to.

Control variables

We control for the age of the respondent and their partner measured in years. Given the limited information on the partner's employment, we can only control for the partner's work hours. Similar to the work hours of the main respondents, we define categorical variables for the working hours of their partners. At the level of the household, we control for the age in years of the youngest child and the number of children, as they capture the intensity of family demands (Stewart et al., 2023).

Analytic Strategy

We conduct our analysis in two steps. First, to identify the effect of work-time demands on work-family conflict, we use fixed-effects linear regression, running separate models for mothers and fathers main respondents. By conducting the analysis separately by gender, we can capture the distinct effects of work-time demands on work-family conflict for mothers and fathers. Employing fixed-effects regressions allows us to control for unobservable time-constant traits that could confound the relationship between work demands and WFC (see Allen et al., 2023). In all models, we include all three measures of work-time demands simultaneously, thereby estimating the effect of each measure while controlling for the effects of the others. In the second step, we build on these models by separately including interaction effects between each of the work-time demands and each source of social support. This approach enables us to estimate the moderating effect of familial and non-familial sources of social support individually. This enables us to individually estimate the moderating effect of the familial and non-familial sources of social support.



Results

Descriptive results

Table 2 presents the descriptive statistics. Mothers and fathers on average report similar levels of WFC. Regarding work hours, the majority of fathers (71.8%) work between 40 and 49 hours per week, which is mostly driven by those who work 40 hours (i.e. 32%), while the majority of mothers (54.6%) work between 30 to 40 hours per week. Mothers and fathers report similar average levels of job pressure, with mothers averaging 3.433 and fathers averaging 3.415. In terms of evening work, 29% of mothers and 34.6% of fathers work regularly during the evening.

A large proportion of both mothers and fathers identify grandmothers as a potential source of support in case of a childcare emergency. In both cases, this perceived support is primarily attributed to the grandmother related to the respondent, with 55.7% of mothers and 57.7% of fathers considering their own mothers as sources of assistance. For comparison, 19.8% of mothers and 27.7% of fathers mentioned their mothers-in-law as possible sources of support. Grandfathers are also considered, with 42.8% of fathers and 32% of mothers identifying their own fathers as a source of support (while fathers in law are considered rarely). Support from other family members seems equally available to both mothers and fathers, while support from friends and neighbours seems to be more available for mothers (45.3% vs 36.5%).

Regressions results

We present the effect of work-time demands on Work-Family Conflict (WFC) in Table 3. The results highlight gender differences in the impact of work-hours and evening work. Compared to mothers who work 29 hours or less, those who work between 30 and 40 hours per week experience WFC levels that are 0.7 points higher (0.710**). For mothers who work 41 hours or more, WFC levels are 1.3 points higher (1.360**). This difference is substantial, given that WFC is measured on a scale from 1 to 5. In contrast, for fathers, we found a statistically significant association only for those in the highest work-hour category (51 hours or more). Evening work is associated with an increased level of WFC for mothers (0.368*), while it has no statistically significant effect on WFC among fathers. Job pressure is positively associated with WFC for both parents, but the effect is more pronounced for fathers (0.325**) than for mothers (0.126**).



Table 2. Descriptive statistics

Variables	Mothers		Fathers	
	Mean	Standard Deviation	Mean	Standard Deviation
Work-time demands				
WFC	2.703	1.136	2.778	1.130
Work hours				
≤ 29	0.354	0.479	-	-
30-40 h	0.546	0.498	-	-
≥ 41h	0.100	0.300	-	-
≤ 39	-	-	0.218	0.413
40-50 h	-	-	0.718	0.450
≥ 51 h	-	-	0.063	0.244
Job pressure	3.433	1.181	3.415	1.138
Evening work	0.290	0.454	0.346	0.476
Support variables				
Grandmothers				
Maternal	0.557	0.497	0.277	.447
Paternal	0.198	0.399	0.577	0.494
Grandfathers				
Maternal	0.320	0.467	0.078	0.268
Paternal	0.046	0.210	0.428	0.495
Other sources of support				
Other family members	0.378	0.485	0.403	0.491
Friends and neighbors	0.453	0.498	0.365	0.482
N obs.	751		600	
N respondents	313		249	



Table 3. The effect of work-time demands on work-to-family conflict

Variables	Mothers	Fathers
Work hours (<i>ref. ≤ 29 h / ≤ 39 h</i>)		
30-40 h / 40-50 h	0.710** (0.135)	0.232 (0.153)
≥ 41h / ≥ 51 h	1.360** (0.222)	0.653* (0.292)
Time pressure	0.126** (0.0462)	0.325** (0.0544)
Evening work	0.368* (0.147)	0.096 (0.158)
Control variables		
Age	0.0314 (0.172)	-0.0560 (0.159)
Partners' age	-0.0226 (0.171)	0.118 (0.159)
Partners' work hours (<i>ref. ≤ 39 h / ≤ 29 h</i>)		
40-50 h / 30-40 h	0.144 (0.170)	0.0802 (0.168)
≥ 51 h / ≥ 41h	0.467 (0.240)	-0.001 (0.276)
Age youngest child	-0.0651* (0.0319)	-0.0780 (0.0626)
Number of children	-0.225* (0.108)	-0.106 (0.128)
N obs.	751	600
N respondents	313	249

Notes: ** p<0.01, * p<0.05; Standard errors in brackets.



Table 4. The moderating effect of social support on WFC

Support	Mothers			Fathers		
	Work hours (ref: ≤29 h)	Time pressure	Evening work	Work hours (ref: ≤39 h)	Time pressure	Evening work
Grandmothers						
Maternal	-0.498* (0.200)	-0.205** (0.075)	-0.563** (0.207)	-0.421 (0.236)	0.050 (0.084)	0.241 (0.195)
	-0.491 (0.317)			-0.165 (0.453)		
Paternal	-0.070 (0.240)	-0.095 (0.089)	-0.137 (0.223)	-0.258 (0.243)	0.047 (0.087)	-0.007 (0.207)
	0.199 (0.374)			0.293 (0.485)		
Grandfathers						
Maternal	-0.417 (0.213)	-0.186* (0.078)	-0.290 (0.224)	0.388 (0.500)	0.078 (0.160)	-0.264 (0.382)
	-0.505 (0.320)			-0.196 (0.751)		
Paternal	0.252 (0.417)	0.0637 (0.146)	-0.598 (0.398)	-0.213 (0.240)	0.026 (0.089)	-0.135 (0.221)
	-0.520 (0.642)			-0.060 (0.507)		
Other sources of support						
Other family members	0.248 (0.181)	0.113 (0.070)	-0.133 (0.184)	-0.0371 (0.228)	-0.182* (0.0772)	-0.165 (0.194)
	-0.317 (0.289)			-0.836* (0.376)		
Friends and neighbors	0.222 (0.199)	0.036 (0.071)	-0.117 (0.198)	0.435 (0.243)	-0.214* (0.089)	-0.0927 (0.208)
	0.0815 (0.328)			0.528 (0.400)		

Notes: ** p<0.01, * p<0.05; Standard errors in brackets.



The main interaction effects for mothers and fathers are summarized in Table 4, while the full models are included in Appendix 2-7, respectively. For mothers, the results show that the effect of work-time demands on WFC is primarily mitigated by support from their own mothers. Specifically, support from maternal grandmothers reduces the impact of working 30-40 hours per week (-0.498*), perceived time pressure (-0.205**), and evening work (-0.563**) on WFC. In contrast, support from the paternal grandmother does not significantly affect WFC for mothers. We find a lower effect for support from grandfathers. Specifically, support from the maternal grandfather slightly moderates the impact on time pressure on WFC (-0.186*), but we find no effect of support from the paternal grandfather.

Moving to our sample of fathers, neither support from the maternal or paternal grandmother has a significant moderating effect on WFC. Similarly, support from grandfathers, whether maternal or paternal, shows no statistically significant moderating effect on WFC.

Other family members' support slightly reduces the impact of evening work on WFC for mothers (-0.133), but the effects are not statistically significant. Interestingly, fathers benefit more from other family members' support, which significantly decreases WFC associated with time pressure (-0.182*) and working 51 hours or more (-0.836*). Support from friends and neighbours has no significant effect on mothers' WFC, but significantly reduces the WFC due to time pressure for fathers (-0.214*).



Conclusions and discussions

Changes in labour markets have made balancing paid work and family responsibilities increasingly difficult, especially for dual-earner parents who must manage the work demands of both partners alongside childcare responsibilities. This challenge intensifies with significant work-time demands (Van Veldhoven and Beijer, 2012; Laß and Wooden, 2022), as more time spent in paid employment directly reduces the time available for family duties. Previous studies suggest that parents can use social support to reduce the conflict between work and family responsibilities (Stewart et al., 2023; Nayak and Pandey, 2022). In this study we expand this literature by investigating the moderating effect of social support, in form of help with childcare in emergency situations,

In line with our first general hypothesis and consistent with previous studies (Tammelin et al., 2017; Gallie and Russell, 2009; Minnotte, 2012; Gallie and Russell, 2009; Taiji and Mills, 2019; Laß and Wooden, 2022), we find a positive effect of work-time demands on the WFC of both mothers and fathers. Additionally, we find differences in the strength of the effects by gender, likely stem from gender roles. In line with H1a, we find that evening work increases WFC for mothers, but not for fathers. This is likely because mothers bear the responsibility of routine afternoon/evening childcare and housework which cannot be easily postponed or left undone (Bianchi et al 2012, Craig and van Tienoven, 2021). Contrary to H1b, the effect of work hours is stronger for mothers than for fathers. Specifically, for mothers, working between 30-40 hours or 41 hours or more is associated with substantially higher levels of WFC, while for fathers, the association was evidenced only when they work 51 hours or more. This difference is likely due to the fact that mothers spend more time caring for children (Garcia-Mainar et al., 2011; Craig and Mullan, 2011; Argyrous and Rahman, 2017). Consequently, even lower working hours interfere with mothers' family responsibilities. Lastly, in line with H1c, work-related time pressure had a stronger effect observed for fathers. This difference is likely rooted in traditional gender roles, which dictate that men should prioritize their work role over their family role (van Veldhoven and Beijer, 2012). Consequently, when faced with work-related time pressure, men are more likely to devote additional time to work, which can further strain the time available for family. This behaviour is also facilitated by the fact that women disproportionately bear the burden of childcare. Confirming our second general hypothesis, we find that social support moderates the effect of work-time demands on WFC. However, contrary to our specific hypotheses, we don't find that the effect is stronger for mothers compared to fathers, but rather that the sources of support that alleviate WFC differ. These findings provide a nuanced understanding of the role of social support in mitigating work-family conflict (WFC), which is linked with gender roles. Mothers bear the largest share of childcare responsibilities. For them, support from other family members or friends and neighbors, which is most likely occasional, is not sufficient. Research generally highlights that grandparents are a crucial source of informal childcare (Craig and Churchill, 2018; Ryser and Heers, 2022; Arpino and Luppi, 2020; Brady 2016;

Gambaro et al 2024). Indeed, we find that support from the maternal grandmother plays a significant role in alleviating the negative impacts of work-time demands on work-family balance, while support from the maternal grandfather has a more limited effect. This difference is likely linked to the fact that, compared to grandfathers, grandmothers are considerably more likely to provide childcare, especially when parents are working (Zamberletti et al., 2018; Thomese and Liefbroer, 2013). The absence of an effect of support from the paternal grandparents is in line with research that suggests that women have stronger relationships with their parents than their in-laws. Women contact and help their parents more than their in-laws (Lee et al., 2004), while maternal grandparents are more likely to provide childcare than paternal grandparents (Thomese and Liefbroer, 2013).

For fathers, we find no significant effect of support from grandmothers or grandfathers on WFC, whereas support from other family members and friends and neighbors does alleviate the impact of work pressure on WFC. Fathers may perceive that grandparents, particularly as they age, are less physically capable and therefore less able to handle the demands of active recreational childcare which fathers more often pursue than mothers. Consequently, support from grandparents might not lead them to perceive a reduction in WFC in the same way that support from more physically capable sources does. This is consistent with research showing that fathers are more likely to rely on friends for assistance with childcare activities requiring mobility and physical activity (e.g., picking up or taking children to their activities or daycare), while depending on grandparents for less physically demanding tasks (e.g., providing advice or caring for a sick child) (Lähtenmäki et al., 2019). Additionally, as fathers age, they increasingly rely on friends or relatives rather than grandparents, further supporting this (Lähtenmäki et al., 2019).

The study is not without limitations. Given the limited information on the employment of the partners, we are not able to account for the work time schedule of the partner. Dual-earner families might choose nonstandard work schedules to ensure that one of the parents is constantly available for childcare (Presser, 2005). Consequently, our models might underestimate the effect of evening work. Additionally, the study focuses solely on Germany, characterized by traditional gender roles. As gender roles can shape the distribution of childcare responsibilities and impact the effectiveness of various sources of social support, future research should aim to compare countries with diverse gender attitudes to better understand how varying cultural norms and family dynamics affect work-to-family conflict across different contexts. Further, selection may bias our findings, in particular for women who may avoid demanding jobs when there are small children at home. In such a case our model estimates likely underestimate the negative effects of work-time demands on maternal WFC. Finally, our measure of social support is not ideal. Specifically, it does not differentiate between the types and intensity of assistance provided by each source. For instance, while neighbors might offer help with short-term care activities (e.g., picking up children from daycare), grandparents may provide more extended care (e.g., preparing dinner, caring for sick children). Future research should aim to capture these nuances in social support, recognizing that different sources may offer distinct forms and levels of assistance.



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Appendix

Appendix 1. Descriptive Characteristics of the Sample

Variables	Mothers		Fathers	
	M	SD	M	SD
Age	37.707	5.029	39.883	4.855
Full-time employment	0.324	0.468	0.923	0.266
Part-time employment	0.676	0.468	0.076	0.266
Work hours	31.016	9.547	42.016	7.131
Partner				
Age	40.498	6.002	37.356	4.626
Full-time employment	0.939	0.239	0.388	0.487
Part-time employment	0.061	0.239	0.612	0.487
Work hours	43.414	7.834	29.711	9.897
Children				
Age youngest	5.371	2.674	5.303	2.604
Number	1.486	0.602	1.483	0.625
N observations	751		600	
N respondents	313		249	

Appendix 2. Interaction models for Mothers: Time pressure

Variables	(1)	(2)	(3)	(4)	(5)	(6)
Main effects						
Time pressure	0.239** (0.061)	0.145** (0.049)	0.190** (0.053)	0.123** (0.047)	0.086 (0.053)	0.108 (0.057)
Grandmother						
Maternal	0.746** (0.267)					
Paternal		0.433 (0.332)				
Grandfather						
Maternal			0.649* (0.290)			
Paternal				-0.001 (0.497)		
Other sources						
Other family					-0.184 (0.253)	
Friend and neighbours						-0.323 (0.265)
Interaction effects						
Time pressure * Grandmother M.	-0.205** (0.075)					
Time pressure * Grandmother P.		-0.096 (0.089)				
Time pressure * Grandfather M.			-0.186* (0.078)			
Time pressure * Grandfather P.				0.064 (0.146)		
Time pressure * Other family					0.113 (0.070)	
Time pressure * Friends and neighbours						0.036 (0.070)
Controls						
Work hours (ref. ≤ 39)						
40-50 h	0.693** (0.135)	0.703** (0.135)	0.742** (0.135)	0.716** (0.136)	0.726** (0.134)	0.725** (0.135)



≥ 51 h	1.348** (0.221)	1.365** (0.223)	1.409** (0.223)	1.357** (0.223)	1.394** (0.222)	1.386** (0.222)
Evening work	0.374* (0.146)	0.357* (0.148)	0.398** (0.147)	0.354* (0.148)	0.360* (0.146)	0.356* (0.147)
Age	0.067 (0.171)	0.016 (0.173)	0.054 (0.172)	0.039 (0.173)	0.030 (0.171)	0.010 (0.172)
Partner						
Age	-0.058 (0.171)	-0.014 (0.172)	-0.043 (0.171)	-0.032 (0.172)	-0.014 (0.170)	-0.005 (0.171)
Work hours (ref. ≤ 39)						
40-50 h	0.150 (0.169)	0.143 (0.171)	0.126 (0.170)	0.125 (0.172)	0.140 (0.170)	0.125 (0.170)
≥ 51 h	0.507* (0.239)	0.460 (0.241)	0.471* (0.239)	0.432 (0.243)	0.443 (0.239)	0.452 (0.240)
Children						
Age youngest	-0.063* (0.031)	-0.065* (0.032)	-0.067* (0.031)	-0.066* (0.032)	-0.067* (0.031)	-0.062 (0.031)
Number	-0.222* (0.108)	-0.226* (0.109)	-0.226* (0.108)	-0.223* (0.109)	-0.215* (0.108)	-0.214* (0.108)
N observations	751	751	751	751	751	751
N respondents	313	313	313	313	313	313



Appendix 3. Interaction models for Mothers: Work hours

Variables	(1)	(2)	(3)	(4)	(5)	(6)
Main effects						
Work hours (ref. ≤ 29)						
30-40 h	0.956** (0.169)	0.724** (0.145)	0.849** (0.152)	0.706** (0.136)	0.644** (0.149)	0.620** (0.164)
≥ 41 h	1.583** (0.280)	1.305** (0.240)	1.537** (0.258)	1.382** (0.226)	1.569** (0.258)	1.334** (0.261)
Grandmother						
Maternal	0.404* (0.166)					
Paternal		0.116 (0.201)				
Grandfather						
Maternal			0.283 (0.171)			
Paternal				0.141 (0.312)		
Other sources						
Other family					0.099 (0.143)	
Friends and n.						-0.340* (0.167)
Interaction effects						
Work hours 30-40 h * Grandmother M.	-0.498* (0.200)					
Work hours ≥ 41 h * Grandmother M.	-0.491 (0.317)					
Work hours 30-40 h * Grandmother P.		-0.070 (0.240)				
Work hours ≥ 41 h * Grandmother P.		0.199 (0.374)				
Work hours 30-40 h * Grandfather M.			-0.417 (0.213)			
Work hours ≥ 41 h * Grandfather M.			-0.505 (0.320)			
Work hours 30-40 h * Grandfather P.				0.252 (0.417)		



Work hours \geq 41 h *					-0.520 (0.642)	
Grandfather P.						
Work hours 30-40 h *						0.248 (0.181)
Other family						
Work hours \geq 41 h *						-0.317 (0.289)
Other family						
Work hours 40-50 h *						0.222 (0.199)
Friends and n.						
Work hours \geq 41 h *						0.081 (0.328)
Friends and n.						
Controls						
Time pressure	0.120** (0.0461)	0.128** (0.0464)	0.138** (0.0465)	0.124** (0.0463)	0.121** (0.0461)	0.125** (0.046)
Evening work	0.361* (0.146)	0.359* (0.149)	0.361* (0.147)	0.369* (0.148)	0.367* (0.146)	0.351* (0.147)
Age	0.022 (0.171)	0.018 (0.173)	0.009 (0.172)	0.020 (0.173)	0.004 (0.171)	0.004 (0.172)
Partner						
Age	-0.007 (0.171)	-0.017 (0.172)	0.003 (0.171)	-0.013 (0.172)	0.003 (0.170)	-0.001 (0.171)
Work hours (ref. \leq 39)						
40-50 h	0.172 (0.170)	0.134 (0.171)	0.152 (0.170)	0.134 (0.171)	0.130 (0.170)	0.132 (0.170)
\geq 51 h	0.471 (0.240)	0.453 (0.242)	0.430 (0.241)	0.450 (0.243)	0.427 (0.239)	0.463 (0.240)
Children						
Age youngest	-0.070* (0.032)	-0.063* (0.032)	-0.067* (0.031)	-0.065* (0.031)	-0.062 (0.031)	-0.060 (0.031)
Number	-0.224* (0.108)	-0.218* (0.109)	-0.217* (0.109)	-0.227* (0.109)	-0.209 (0.108)	-0.219* (0.109)
N observations	751	751	751	751	751	751
N respondents	313	313	313	313	313	313



Appendix 4. Interaction models for Mothers: Evening work

Variables	(1)	(2)	(3)	(4)	(5)	(6)
Main effects						
Evening work	0.704** (0.191)	0.397* (0.162)	0.448** (0.160)	0.400** (0.150)	0.409* (0.161)	0.415* (0.178)
Grandmother Maternal	0.239 (0.122)					
Paternal		0.140 (0.133)				
Grandfather Maternal			0.104 (0.133)			
Paternal				0.383 (0.236)		
Other sources Other family					0.233* (0.102)	
Friends and n.						-0.162 (0.118)
Interaction effects						
Evening work * Grandmother M.	-0.563** (0.207)					
Evening work * Grandmother P.		-0.137 (0.223)				
Evening work * Grandfather M.			-0.290 (0.224)			
Evening work * Grandfather P.				-0.598 (0.398)		
Evening work * Other family					0.133 (0.184)	
Evening work * Friends and n.						-0.117 (0.198)
Controls						
Work hours (ref. ≤ 39)						
40-50 h	0.688** (0.135)	0.704** (0.136)	0.710** (0.135)	0.715** (0.135)	0.717** (0.135)	0.726** (0.135)
≥ 51 h	1.360** (0.221)	1.348** (0.223)	1.371** (0.223)	1.358** (0.222)	1.372** (0.222)	1.387** (0.222)
Time pressure	0.128** (0.045)	0.128** (0.046)	0.131** (0.046)	0.128** (0.046)	0.129** (0.046)	0.126** (0.046)
Age	0.035 (0.171)	0.037 (0.173)	0.023 (0.172)	0.035 (0.172)	0.025 (0.171)	0.010 (0.172)
Partner						
Age	-0.0234 (0.170)	-0.0352 (0.172)	-0.0127 (0.171)	-0.0283 (0.171)	-0.0155 (0.170)	-0.00449 (0.171)
Work hours (ref. ≤ 29)						



30-40 h	0.688** (0.135)	0.704** (0.136)	0.710** (0.135)	0.715** (0.135)	0.717** (0.135)	0.726** (0.135)
≥ 41 h	1.360** (0.221)	1.348** (0.223)	1.371** (0.223)	1.358** (0.222)	1.372** (0.222)	1.387** (0.222)
Children						
Age youngest	-0.064* (0.031)	-0.064* (0.032)	-0.067* (0.032)	-0.063* (0.031)	-0.061 (0.031)	-0.060 (0.031)
Number	-0.216* (0.108)	-0.219* (0.109)	-0.217* (0.109)	-0.218* (0.108)	-0.208 (0.108)	-0.214* (0.108)
N observations	751	751	751	751	751	751
N respondents	313	313	313	313	313	313



Appendix 5. Interaction models for Fathers: Time pressure

Variables	(1)	(2)	(3)	(4)	(5)	(6)
Main effects						
Time pressure	0.302** (0.0701)	0.322** (0.0588)	0.316** (0.0644)	0.323** (0.0551)	0.388** (0.0612)	0.404** (0.0644)
Grandmother						
Maternal		0.0694 (0.313)				
Paternal	-0.137 (0.328)					
Grandfather						
Maternal			-0.028 (0.329)			
Paternal				-0.222 (0.518)		
Other sources						
Other family					0.470 (0.284)	
Friends and neighbours						0.927** (0.329)
Interaction effects						
Time pressure * Grandmother M.		0.050 (0.084)				
Time pressure * Grandmother P.	0.047 (0.087)					
Time pressure * Grandfather M.			0.027 (0.089)			
Time pressure * Grandfather P.				0.078 (0.160)		
Time pressure * Other family					-0.182* (0.077)	
Time pressure * Friends and n.						-0.214* (0.089)
Controls						
Work hours (ref. ≤ 39)						
40-50 h	0.227 (0.154)	0.230 (0.153)	0.223 (0.154)	0.230 (0.154)	0.203 (0.152)	0.232 (0.152)



≥ 51 h	0.649* (0.293)	0.655* (0.291)	0.648* (0.293)	0.643* (0.295)	0.699* (0.290)	0.662* (0.289)
Evening work	0.0996 (0.158)	0.138 (0.158)	0.0920 (0.158)	0.0889 (0.160)	0.118 (0.157)	0.133 (0.157)
Age	-0.0584 (0.159)	-0.0646 (0.158)	-0.0587 (0.160)	-0.0509 (0.159)	-0.0741 (0.157)	-0.0490 (0.158)
Partner						
Age	0.117 (0.160)	0.107 (0.158)	0.121 (0.161)	0.115 (0.159)	0.128 (0.157)	0.125 (0.158)
Work hours (ref. ≤ 29)						
30-40 h	0.0797 (0.169)	0.0598 (0.168)	0.0775 (0.169)	0.0848 (0.169)	0.0854 (0.167)	0.109 (0.168)
≥ 41 h	-0.000 (0.277)	0.0139 (0.275)	-0.007 (0.279)	0.003 (0.277)	-0.016 (0.274)	0.033 (0.274)
Children						
Age youngest	-0.073 (0.063)	-0.077 (0.062)	-0.077 (0.062)	-0.080 (0.063)	-0.071 (0.062)	-0.084 (0.062)
Number	-0.099 (0.129)	-0.090 (0.127)	-0.111 (0.129)	-0.108 (0.128)	-0.082 (0.127)	-0.120 (0.127)
N observations	600	600	600	600	600	600
N respondents	249	249	249	249	249	249



Appendix 6. Interaction models for Fathers: Work hours

Variables	(1)	(2)	(3)	(4)	(5)	(6)
Main effects						
Work hours (ref. ≤ 39)						
40-50 h	0.366 (0.198)	0.333* (0.164)	0.309 (0.181)	0.213 (0.155)	0.251 (0.178)	0.0909 (0.170)
≥ 51 h	0.498 (0.386)	0.711* (0.300)	0.688* (0.325)	0.694* (0.305)	1.124** (0.347)	0.500 (0.318)
Grandmother						
Maternal		0.558** (0.211)				
Paternal	0.211 (0.230)					
Grandfather						
Maternal			0.222 (0.225)			
Paternal				-0.236 (0.436)		
Other sources						
Other family					-0.065 (0.204)	
Friends and neighbours						-0.155 (0.223)
Interaction effects						
Work hours 40-50 h * Grandmother M.		-0.421 (0.236)				
Work hours ≥ 51 h * Grandmother M.		-0.165 (0.453)				
Work hours 40-50 h * Grandmother P.	-0.258 (0.243)					
Work hours ≥ 51 h * Grandmother P.	0.293 (0.485)					
Work hours 40-50 h * Grandfather M.			-0.213 (0.240)			
Work hours ≥ 51 h * Grandfather M.			-0.060 (0.507)			
Work hours 40-50 h * Grandfather P.				0.388 (0.500)		



Work hours \geq 51 h * Grandfather P.				-0.196 (0.751)		
Work hours 40-50 h * Other family					-0.0371 (0.228)	
Work hours \geq 51 h * Other family					-0.836* (0.376)	
Work hours 40-50 h * Friends and neighbours						0.435 (0.243)
Work hours \geq 51 h * Friends and neighbours						0.528 (0.400)
Controls						
Time pressure	0.330** (0.054)	0.334** (0.054)	0.327** (0.054)	0.324** (0.054)	0.326** (0.054)	0.314** (0.054)
Evening work	0.086 (0.158)	0.135 (0.158)	0.090 (0.160)	0.082 (0.160)	0.135 (0.158)	0.113 (0.158)
Age	-0.049 (0.159)	-0.075 (0.158)	-0.058 (0.160)	-0.068 (0.160)	-0.069 (0.158)	-0.047 (0.159)
Partner						
Age	0.113 (0.160)	0.114 (0.158)	0.124 (0.160)	0.126 (0.160)	0.117 (0.158)	0.115 (0.159)
Work hours (ref. \leq 29)						
30-40 h	0.0772 (0.169)	0.0547 (0.168)	0.0759 (0.169)	0.0572 (0.171)	0.0298 (0.168)	0.0567 (0.169)
\geq 41 h	0.0087 (0.277)	-0.007 (0.274)	-0.017 (0.278)	-0.029 (0.278)	-0.008 (0.274)	0.024 (0.275)
Children						
Age youngest	-0.078 (0.062)	-0.071 (0.062)	-0.080 (0.062)	-0.074 (0.062)	-0.071 (0.062)	-0.082 (0.062)
Number	-0.101 (0.128)	-0.088 (0.127)	-0.111 (0.129)	-0.106 (0.128)	-0.066 (0.127)	-0.106 (0.127)
N observations	600	600	600	600	600	600
N respondents	249	249	249	249	249	249



Appendix 7. Interaction models for Fathers: Evening Work

Variables	(1)	(2)	(3)	(4)	(5)	(6)
Main effects						
Evening work	0.100 (0.201)	0.0775 (0.165)	0.153 (0.186)	0.114 (0.162)	0.192 (0.178)	0.141 (0.174)
Grandmother						
Maternal		0.163 (0.127)				
Paternal	0.0300 (0.145)					
Grandfather						
Maternal				0.156 (0.286)		
Paternal			0.118 (0.154)			
Other sources						
Other family					-0.098 (0.121)	
Friends and neighbours						0.231 (0.141)
Interaction effects						
Evening work * Grandmother M.		0.241 (0.195)				
Evening work * Grandmother P.	-0.007 (0.207)					
Evening work * Grandfather M.				-0.264 (0.382)		
Evening work * Grandfather P.			-0.135 (0.221)			
Evening work * Other family					-0.165 (0.194)	
Evening work * Friends and neighbours						-0.092 (0.208)
Controls						
Work hours (ref. ≤ 39)						
40-50 h	0.231 (0.153)	0.224 (0.152)	0.220 (0.154)	0.237 (0.154)	0.243 (0.153)	0.228 (0.153)



≥ 51 h	0.655* (0.293)	0.658* (0.290)	0.649* (0.293)	0.666* (0.295)	0.737* (0.297)	0.660* (0.292)
Time pressure	0.325** (0.054)	0.336** (0.054)	0.324** (0.054)	0.323** (0.055)	0.316** (0.054)	0.323** (0.054)
Age	-0.058 (0.160)	-0.077 (0.158)	-0.070 (0.160)	-0.057 (0.159)	-0.059 (0.159)	-0.032 (0.159)
Partner						
Age	0.121 (0.160)	0.117 (0.158)	0.131 (0.160)	0.118 (0.159)	0.117 (0.159)	0.105 (0.159)
Work hours (ref. ≤ 29)						
30-40 h	0.082 (0.169)	0.045 (0.168)	0.081 (0.169)	0.073 (0.169)	0.071 (0.168)	0.072 (0.168)
≥ 41 h	0.003 (0.277)	-0.011 (0.275)	0.010 (0.277)	-0.011 (0.277)	0.026 (0.276)	0.004 (0.275)
Children						
Age youngest	-0.077 (0.062)	-0.076 (0.062)	-0.076 (0.062)	-0.078 (0.063)	-0.080 (0.062)	-0.088 (0.062)
Number	-0.108 (0.128)	-0.097 (0.127)	-0.117 (0.129)	-0.111 (0.128)	-0.090 (0.128)	-0.114 (0.128)
N observations	600	600	600	600	600	600
N respondents	249	249	249	249	249	249





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