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Work-to-family conflict, family-to-work conflict and their relation to perceived parenting and the parent-child relationship before and during the first Covid-19 lockdown

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Abstract

Objective: Our objective is twofold: First, to examine whether, to what extent and for whom (by sex and educational attainment) work-to-family conflict (W→F-conflict) and family-to-work conflict (F→W-conflict) increased from the pre-Covid-19 period to the first lockdown period. Second, to examine whether and to what extent the negative associations between W→F-conflict/F→W-conflict and perceived parenting (positive encouragement, coercive parenting and the parent-child relationship) became stronger.

Background: During the first Covid-19 lockdown, parents were asked to provide childcare and home-schooling for their children while also being expected to fulfil their work obligations. Under these circumstances, this study was set out to examine how W→F-conflict/F→W-conflict, perceived parenting and their associations were affected.

Method: Multilevel regression models were applied to longitudinal data collected among 55 employed mothers and 76 employed fathers with a 3-year-old child at wave 1.

Results: We found that F→W-conflict/W→F-conflict increased most strongly among highly educated mothers, followed by lower/medium educated mothers and highly educated fathers, while no increase or even a decrease was observed among lower/medium educated fathers. We found some associations between W→F-conflict/F→W-conflict with perceived parenting, but these did not consistently become stronger during the Covid-19 wave. Although overall heightened levels of conflict did not strongly spill over to mothers' and fathers' perceived parenting, our results showed that for some parents conflict clearly increased with negative implications for their perceived parenting.

Conclusion: With some noteworthy exceptions, increases in F→W-conflict/W→F-conflict did not coincide with decreases in perceived parenting, indicating that most parents did not let increased conflict between work and family affect their parenting.

Key words: Covid-19, work-family conflict, parenting, gender inequalities, educational differences, the Netherlands



1. Introduction

The Covid-19 pandemic, and the social distancing regulations aimed at slowing down and preventing the spread of the disease, have impacted, and remain to impact, families across the world. Many countries went into (partial) lockdown in March 2020, which strongly influenced key aspects of life. In the Netherlands, from the 16th of March 2020 onwards, all schools and day-care centers closed. For a period of almost two months most children in the Netherlands were unable to go to school and day-care centers, and all other informal forms of childcare, such as care by grandparents, were discouraged by the Dutch government. On May 11th schools in the Netherlands were allowed to re-open partially, enabling children to attend school for approximately half of their regular school hours, and from the 8th of June primary schools re-opened entirely. Also, from March 2020 onwards, the Dutch government recommended employees to work from home as much as possible. Although this was not possible for all workers, a large part of the Dutch working population started working from home at least part of their workweek (Von Gaudecker et al. 2020).

These regulations strongly impacted family life, mainly among working parents with pre-school and school-aged children. Normally, children in primary schools in the Netherlands spend on average 25 hours per week in school, and on average another 12 hours at some form of childcare (Roeters & Bucx 2018). Between the 16th of March and the 8th of June, these hours were all spent at home, leaving the care and the home-schooling responsibilities entirely to the parents. (The exception to this rule were children of parents with essential occupations, such as healthcare workers and supermarket employees, who were allowed to go to school and day-care centers (Verhue & Bouwman 2020). Around 16% of the families in the Netherlands consist of parents with essential occupations. Unfortunately, no numbers are available on the percentage of children from these families that actually went to school or day-care.)

Prior to the Covid-19 lockdown, many mothers and fathers already experienced conflicts between work and family demands (Shockley et al. 2017). In the literature, two types of work-family conflict are identified: (1) work-to-family conflict (which we have labelled 'W→F-conflict' throughout this manuscript), where obligations from work make it difficult to fulfil family responsibilities, and (2) family-to-work conflict (which we have labelled 'F→W-conflict' throughout this manuscript), where family obligations make it difficult to fulfil work responsibilities (Greenhaus & Beutell 1985). Given the strongly changed circumstances regarding work and family responsibilities during the lockdown, the first aim of this study is to examine whether, to what extent, and for whom feelings of W→F-conflict and F→W-conflict increased during the Covid-19 lockdown, compared to the period before. There is reason to assume that both F→W-conflict and W→F-conflict increased, as family responsibilities clearly intensified, while work obligations remained present for many parents.

Given that the division of paid work and childcare is still highly gendered in the Netherlands, as women perform the majority of childcare tasks (Dulk & Yerkes 2016), we examined differences in (increases in) feelings of W→F-conflict and F→W-conflict between fathers and mothers. In addition, we examined the extent to which increases in W→F-conflict and F→W-conflict differed between higher and lower/medium educated parents,

the rationale being that these groups not only differ in their parenting practices and values (Lareau 2002), but also their working hours (CBS 2020).

The second aim of the current study was to investigate associations between W→F-conflict/F→W-conflict with perceived parenting (positive encouragement, coercive parenting and the parent-child relationship), and scrutinize whether and to what extent these hypothesized negative associations became stronger during the first Covid-19 lockdown. Previous studies showed that parents who experience more conflict between work and family demonstrated a lower quality of parenting behavior (Cooklin et al. 2016, Matejević & Đorđević 2019). During the lockdown period, negative associations between conflict and perceived parenting might have been stronger given the fact that parents were expected to be intensively involved with their children's care and school work, while at the same time they could rely less on others for support with childcare (Prime et al. 2020), which increases the likelihood that conflict spills over to perceived parenting.

To answer our research questions, we made use of prospective data. The first wave of data was collected between May 2018 to January 2020 in families with both fathers as well as mothers and their 3-year-old child. During the first Covid-19 lockdown in early 2020, a second wave of data was collected, again administering questionnaires to the same parents about, among others, their conflict between work and family and their perceptions of their own parenting. The data used in this study are from the Netherlands, which is known for its one-and-a-half earner model, in which most women work part-time, and most men work full-time. Full-time day-care for children is very uncommon in the Netherlands (Mills 2015), and the idea that women are better than men at raising young children is still quite common (Thijs et al. 2019). From the age of 4 children in the Netherlands attend primary school. At wave 2, the majority of children attended school but not all. But given that day-care centers and primary schools closed at the same time during the lockdown, all parents in the sample faced the same lockdown regulations.

To summarize, we examined (1) whether and to what extent parents experienced increases in W→F-conflict and F→W-conflict, (2) for which groups of parents (mothers versus fathers, higher vs lower/medium educated parents) these increases were most substantial, and (3) whether and to what extent the association between conflict and perceived parenting changed during the lockdown compared to the period before the lockdown.

2. Background and hypotheses

2.1 *Comparing F→W-conflict and W→F-conflict before and during Covid-19 lockdown*

The concept of work-family conflict has originally been developed by Greenhaus and Beutell (1985) as the inter-role conflict that arises through conflicting pressures and expectations from the work and family roles. The concept of work-family conflict has originally been developed by Greenhaus and Beutell (1985) as the inter-role conflict that arises through conflicting pressures and expectations from the work and family roles. The conflict between

work and family can take on two forms; $W \rightarrow F$ -conflict and $F \rightarrow W$ -conflict. $W \rightarrow F$ -conflict captures the extent to which time devoted to work, and strain stemming from the workplace, interferes with family life, such as not being able to fulfil family responsibilities. $F \rightarrow W$ -conflict captures the extent to which time demands and emotional strain that comes from family life interferes with work, such as not being able to meet work deadlines (Greenhaus & Beutell 1985). $W \rightarrow F$ -conflict and $F \rightarrow W$ -conflict are considered distinct concepts with different relations to external variables (Mesmer-Magnus & Viswesvaran 2005), although previous research has found a relatively high correlation between $W \rightarrow F$ -conflict and $F \rightarrow W$ -conflict of 0.38 (see the meta-analysis by Mesmer-Magnus & Viswesvaran, 2005). As their names suggest, previous research showed that $W \rightarrow F$ -conflict is mainly driven by work-related aspects, such as the flexibility of work hours, while $F \rightarrow W$ -conflict is more strongly driven by family aspects, such as the age and number of children in the household (Byron 2005).

During the lockdown, especially family responsibilities were intensified, as home-schooling and caring for the children became the full responsibility of parents. At the same time, during the lockdown in the Netherlands, the majority of employees did not experience changes in work pressure (Yerkes et al. 2020) and working hours largely remained unchanged (Von Gaudecker et al. 2020). Yet, there might be substantial variation between individuals, as quite some individuals worked in sectors that closed during the lockdown, and as such reduced their working hours (Cantillon et al. 2021, Müller & Schulten 2020).

Because family obligations intensified most, and work obligations remained unchanged for many individuals, $F \rightarrow W$ -conflict likely increased over time. It is also likely that $W \rightarrow F$ -conflict increased because work obligations could have hindered the ability to help one's children with home-schooling. However, we expect a weaker increase in $W \rightarrow F$ -conflict compared to $F \rightarrow W$ -conflict, as for some parents a reduction in commuting time, and more flexibility in working hours while working from home might have reduced the feeling that work hindered fulfilling parenting tasks. Based on the abovementioned, we expect that especially $F \rightarrow W$ -conflict, and to a lesser extent also $W \rightarrow F$ -conflict increased, leading to the hypotheses that $F \rightarrow W$ -conflict (*H1a*) and $W \rightarrow F$ -conflict (*H1b*) increased between wave 1 and 2.

2.2 Differences between fathers and mothers in hypothesized increases in $F \rightarrow W$ -conflict and $W \rightarrow F$ -conflict

There are reasons to expect differences between fathers and mothers in the extent to which conflict between work and family increased between waves 1 and 2. These hypothesized differences could work in opposite directions, implying stronger increases in conflict among fathers, but also among mothers. Firstly, there is reason to assume that conflict increased most among mothers. The Netherlands is known for its one-and-a-half earner model in which 75% of working women work part-time (compared to 25% of working men), and parenting tasks are mostly shouldered by mothers (Dulk & Yerkes 2016, Mills 2015). One study from the Netherlands already showed that, even though fathers reported being relatively more involved during the Covid-19 period as compared to their relative involvement prior to Covid-19, mothers still performed the majority of childcare tasks, and

reduced their hours of leisure to a much larger extent (Yerkes et al. 2020). Based on the above, we hypothesize that *F→W-conflict increased more strongly among mothers than fathers (H2a)*. We can also expect that *W→F-conflict increased more strongly among mothers than fathers*. Previous research found that mothers, more often than fathers, experience feelings of guilt that their children might suffer from their work commitment (Borelli et al. 2017). This difference in feelings of guilt is likely due to internalized gender roles through which mothers feel more responsible for childcare than fathers (Fetterolf & Rudman 2014). Given that work obligations remained largely unchanged during the lockdown, mothers in particular might have felt that they were not able to perform all the childcare and home-schooling activities that arose. Therefore, we hypothesize that *W→F-conflict increased more strongly among mothers than fathers (H2b)*. Findings from among others Singapore, Australia and Italy, indeed indicated that during the lockdown the disbalance between work and family was much more common among mothers than among fathers (Chung et al. 2020, Del Boca et al. 2020, Craig & Churchill 2020).

In contrast, it can also be argued that *F→W-conflict* and *W→F-conflict* might have increased more strongly among fathers than among mothers. First, the lockdown implied that in particular many fathers saw a strong relative increase in the hours spent at home in the presence of their children. Before the lockdown, mothers in the Netherlands were already more used to being at home with their children part of the week (CBS 2020). For fathers, fulfilling one's work obligations during lockdown might have been a bigger challenge than for mothers given the relatively stronger increase of time spent with their children. Prior to the lockdown, many parenting tasks were mainly considered mothers responsibility, while during the lockdown many fathers were also confronted with these tasks. This leads to the following hypothesis: *F→W-conflict increased more strongly among fathers than mothers (H3a)*. It can also be argued that *W→F-conflict increased more strongly for fathers than mothers*. Men in the Netherlands work more hours than women, on average 40 hours per week, compared to 26 hours per week among women (Roeters & Bucx 2018), and men also more often work overtime (Van Echtelt et al. 2009, García 2017). Furthermore, despite that mothers still do the majority of childcare tasks, fathers' participation in these tasks has increased over the last years (Dotti Sani & Treas 2016). Therefore, fathers also have to combine work and family roles, and previous research showed that fathers, just as mothers, report conflict between these two roles (Shockley et al. 2017). Men in particular experience a strong ideal worker norm, which expects employees to be fully committed and available to their work (Acker 1990, Acker 2012). Given the higher working hours of men in the Netherlands, it is possible that, during the lockdown, fathers were even more likely than mothers to experience tensions in their ability to fulfil the additional childcare and home-schooling responsibilities. As such, we hypothesize that *W→F-conflict increased more strongly among fathers than mothers (H3b)*.

2.3 Differences by educational level in hypothesized increases in *F→W-conflict* and *W→F-conflict*

Beyond differences by parents' sex, feelings of conflict between work and family might also differ by parents' educational level. There are two interrelated reasons to expect that higher

educated parents experienced more $W \rightarrow F$ -conflict and $F \rightarrow W$ -conflict, in particular during the lockdown period, compared to lower/medium educated parents. First of all, it can be expected that higher educated parents experience more $F \rightarrow W$ -conflict and $W \rightarrow F$ -conflict because they work more hours and work more overtime, and higher working hours are related to greater $W \rightarrow F$ -conflict and $F \rightarrow W$ -conflict (Byron 2005). In the Netherlands, higher educated women work on average 30 hours while medium educated women work 25 hours, and lower educated women work 20 hours a week (CBS 2020). Among men, these numbers are 37, 36, and 31 hours respectively (CBS 2020). Higher educated individuals also work more overtime than their lower educated counterparts (Van Echtelt et al. 2009).

Secondly, we expect higher educated parents to experience more $F \rightarrow W$ -conflict and more $W \rightarrow F$ -conflict because they on average adhere to a more intensive parenting ideology compared to lower educated parents (Lareau 2002). Higher educated parents often more actively try to stimulate the development of their children through various activities, while lower educated parents more often believe in the process of natural growth and simultaneously may feel less capable of supporting their children with their homework. Because of these differences, higher educated parents on average spend more time in caring for their children, playing with their children, and helping their children (Sayer et al. 2004).

We expect that this combination of intensive parenting ideologies with long working hours gave highly educated parents the feeling that they could not fulfil both of these tasks adequately during the lockdown. This leads to the hypothesis that *the increases in $F \rightarrow W$ -conflict and $W \rightarrow F$ -conflict are stronger for highly educated parents compared to lower/medium educated parents (H4)*.

2.4 *The associations between $F \rightarrow W$ -conflict and $W \rightarrow F$ -conflict with perceived parenting*

Previous studies showed that parents who experience more $W \rightarrow F$ -conflict and $F \rightarrow W$ -conflict show more negative parenting such as an authoritarian parenting style (Matejević & Đorđević 2019), hostile parenting behavior (Cooklin et al. 2016, Cooklin et al. 2015, Vahedi et al. 2019), and negative communication (such as yelling to the child) (Eynde et al. 2000), less positive parenting such as less parental consistency and warmth (Cooklin et al. 2016, Cooklin et al. 2015) and more negative feelings towards the child (Cooklin et al. 2016, Cooklin et al. 2015) and lower perceived relationship quality (Vieira et al. 2016). In this study, we examined three different aspects of perceived parenting, namely positive encouragement, coercive discipline, and the parent-child relationship. Positive encouragement is the extent to which parents encourage and praise positive behaviour of their children and is associated with, among others, fewer child misbehaviour (Webster-Stratton 2007). Coercive parenting refers to the extent to which parents, among others, shout to or spank their children and is associated with a wide range of negative child outcomes, such as low self-esteem and depressive feelings (Hoskins 2014). The parent-child relationship in this study refers to the positive feelings that parents derive from the relationship with their child (Sanders et al. 2014). A positive parent-child relationship is essential for children's well-being and development (Lamb 2011).

There are two main pathways through which $W \rightarrow F$ -conflict and $F \rightarrow W$ -conflict could be associated with perceived parenting. The first pathway is through parents' stress and negative mood. Previous research found that $W \rightarrow F$ -conflict and $F \rightarrow W$ -conflict are strongly positively linked to several types of stress, such as psychological stress, parental stress, and emotional exhaustion (Nohe et al. 2015, Allen et al. 2000, Yavas et al. 2008). This link between $W \rightarrow F$ -conflict and $F \rightarrow W$ -conflict and stress is caused by the overload between the demands stemming from the two roles (Nohe et al. 2015, Yavas et al. 2008). Stress stemming from the conflict between work and family can impact parents' mood and make them more irritated and frustrated (Repetti 1999, Bolger et al. 1989). This negative mood stemming from stress might influence perceived parenting because it relates to the threshold parents have in responding to child's positive and negative behaviour; parents with a negative mood are found to be more rejecting and punishing towards their children and have fewer positive interactions with their children (Belsky et al. 1995). Therefore, this negative mood stemming from $W \rightarrow F$ -conflict and $F \rightarrow W$ -conflict might relate to more coercive parenting and a less positive parent-child relationship.

The second pathway through which $W \rightarrow F$ -conflict and $F \rightarrow W$ -conflict could influence perceived parenting is through social withdrawal. Previous research showed that one strategy that parents use to deal with stress stemming from their work, is social withdrawal at home (Repetti & Wood 1997, Repetti & Wang 2017, Repetti et al. 2009). This strategy could also be used to deal with stress stemming from $W \rightarrow F$ -conflict and $F \rightarrow W$ -conflict. One type of social withdrawal, namely emotional withdrawal, implies that parents are physically present but emotionally absent (Ranson 2001). These emotionally absent parents might not have the energy and attention to praise their child for good behaviour (positive encouragement) or might spend less time playing and hugging with their child (which is an aspect of a positive parent-child relationship). To summarize, we expect that negative mood and social withdrawal can be a response to stress stemming from both $W \rightarrow F$ -conflict and $F \rightarrow W$ -conflict and as such may function as an underlying mechanism in the relationship with perceived parenting. Therefore, we expect that *greater levels of $F \rightarrow W$ -conflict and $W \rightarrow F$ -conflict are associated with less positive perceived parenting (H5)*.

2.5 Perceived parenting during the Covid-19 lockdown

Concerns about parenting increased during the Covid-19 lockdown (Prime et al. 2020). One possible explanation for this concern is that research from previous crises, such as the Great Farm Crisis in the 1980s in the United States, or the global economic crisis in 2008, showed that during these crises quality of parenting generally decreased (Prime et al. 2020). During crises, parents experience many sources of stress and uncertainty. During the Covid-19 crisis, parents might have had financial worries, were worried about their health or the health of their relatives, and had an increasing amount of parenting tasks to fulfil. In line with the family stress model, these types of stress might have resulted in lower quality of parenting (Conger et al. 2000), such as harsher parenting and less sensitive and supportive parenting (Masarik & Conger 2017).

During the lockdown, parents spend more time with their children (Verhue & Bouwman 2020). Concerning the parent-child relationship, under normal circumstances, more contact between parents and children is generally related to more favourable

perceptions of the parent-child relationship as rated by the parent (Roeters et al. 2010). However, the experiences of stress might have hindered parents to reap the benefits from intensified contact in terms of positive perceptions of the parent-child relationship. Furthermore, the parents in our sample had to combine their time with their children with fulfilling work obligations, and research showed that when activities with children are frequently interrupted by work duties, perceptions of the quality of the parent-child relationship decrease (Roeters et al. 2010). The only study that we are aware of showed that during the lockdown in the UK parents often had the feeling that the relationship with their children improved (Perelli-Harris & Walzenbach 2020). However, this study used a retrospective measure, also included parents that did not work, and included older children. Therefore, we argue that these findings should not be influential in formulating hypotheses for our sample. Altogether, we hypothesize that *perceived parenting became less positive during wave 2 compared to wave 1 (H6)*.

2.6 Stronger linkages between $F \rightarrow W$ -conflict/ $W \rightarrow F$ -conflict with perceived parenting during the Covid-19 lockdown

On top of a possible general tendency towards less positive perceived parenting, we expected that during the Covid-19 lockdown, associations between $F \rightarrow W$ -conflict/ $W \rightarrow F$ -conflict and perceived parenting would be more negative than those assessed during the pre-Covid-19 period. Prior to the lockdown, parents who experienced $F \rightarrow W$ -conflict/ $W \rightarrow F$ -conflict might have been more successful in maintaining positive levels of perceived parenting, since they had more opportunities to handle their frustrations and let off steam. They could leave the house for example for sports activities which could reduce their frustration, while during the lockdown many sports activities were cancelled. Also, during the lockdown in the Netherlands, people were urged to avoid social contact (yet not prohibited), while social contact and social support have been found to protect against the negative consequences of for example high workload and financial stress on parenting (Leinenen et al. 2003, Lee et al. 2009). Parents who experienced $W \rightarrow F$ -conflict/ $F \rightarrow W$ -conflict were not able to bring their children to the grandparents, who under normal circumstances are often a source of support (Roeters & Bucx 2018). Furthermore, during the lockdown parenting and working were, for most parents, not separate spheres; children could interrupt work meetings and work obligations could interrupt moments with children. Consequently, parents might have been less successful in preventing $F \rightarrow W$ -conflict/ $W \rightarrow F$ -conflict to spill over to perceived parenting. Parents therefore might not have been able to provide their children with positive encouragement or might not have been able to refrain from harsh parenting (Prime et al. 2020). With regard to the parent-child relationship, parents who experienced a lot of $F \rightarrow W$ -conflict/ $W \rightarrow F$ -conflict might have felt more frustrated by the interference of their children during work time, which might have resulted in more negative feelings towards their children. Based on the above, we expect that *the negative associations between $F \rightarrow W$ -conflict/ $W \rightarrow F$ -conflict and perceived parenting are stronger during wave 2 than during wave 1 (H7)*.

3. Methods

3.1 Participants

In the current study, data were used from an interdisciplinary research project investigating the role of fathers and mothers in young children's development. A total of 104 3-year-old children (51 boys, M age = 41.43 months, SD age = 3.93) and their parents (104 mothers and 104 fathers) from the city region of *blinded for review* participated in the study. Families were recruited by a team of student assistants at (indoor) playgrounds, national festivities, swimming pools, libraries, and general outdoors such as neighbourhoods and shopping malls. Eligibility criteria were (1) having a 3-year-old child during the first wave; (2) being a two-parent residential family, and (3) having a Dutch native background (mother and father of both parents were born in the Netherlands). We recruited 53 families with a relatively high educational background (at least one of the parents obtained higher vocational training or (post) university degree) and 51 families with a relatively low/medium educational background (neither parent more than intermediate vocational training).

The first questionnaires were filled in between May 2018 and January 2020, when the child was three years old. During the first Covid-19 lockdown, on April 15 all participants from the initial wave were asked to fill in a second online questionnaire. By May 11, 100 families of the initial sample had replied (96%). Data from four families were removed from our analyses because the parents separated in between the two waves, which makes their situation less comparable to those of the majority of two-parent households. From the 96 remaining families, we have information from both mother and father within 90 families, and from the remaining 6 families, we solely have information from the mother.

We only include those parents who were working in both waves 1 and 2, because we are interested in $W \rightarrow F$ -conflict/ $F \rightarrow W$ -conflict, on which information is missing when respondents do not work. This selection reduced especially the proportion of lower/medium educated mothers, since 48% of the lower/medium educated mothers did not work in either one or both waves, compared to 35% higher educated mothers. The majority of these lower/medium educated mothers already did not work during the first wave of data collection. In our sample, among lower/medium educated mothers, the percentage of mothers not working increased from 43% to 46% between waves, while among higher educated mothers this increase was stronger, namely from 9% to 19%. A similar, although weaker, pattern was also found for the fathers in our sample – 25% of the lower/medium educated fathers were excluded based on this criterium in comparison to none of the higher educated fathers. The number of lower/medium educated fathers that did not work increased from 13% to 22%. This selection resulted in 55 mothers and 76 fathers who were employed during both waves. Given that we had data on both the mother and the father within each family, this also implies that if one of the parents was working but the partner was not, only the partner who did not work was removed from our analyses.

3.2 Procedure

At the first wave of data collection, all families were visited at home by two trained observers. During the first 30 minutes of each parent-child session, the parent was asked to fill in an online questionnaire using a tablet. The observers did not interfere with the parent while they were filling in the questionnaire. Children were instructed to play for themselves, while their parent filled in the questionnaire. During the lockdown period, due to Covid-19-regulations, the families could not be visited in their homes. Therefore, they received the online questionnaire through email. Both measurements T1 and T2 of this study were approved by the Ethics Committee of the Department of Sociology and Public Administration, Erasmus University of Rotterdam. All parents provided informed consent for participating in the study.

3.3 Measures

W→F-conflict was assessed by using the work-family conflict scale as developed and validated by Netemeyer and colleagues (1996). Respondents were asked the extent to which the following situations applied to them: 1) The demands of my work interfere with my home and family life; 2) The amount of time my job takes up makes it difficult to fulfil family responsibilities; 3) Things I want to do at home do not get done because of the demands my job puts on me; 4) My job produces strain that makes it difficult to fulfil family duties; 5) Due to work-related duties, I have to make changes to my plans for family activities. Respondents could respond on a seven-point scale ranging from 1) totally disagree to 7) totally agree. Scores on each of the 5 items, ranging from 1 to 7, were averaged, where a higher score reflects higher *W→F-conflict*. Cronbach's alpha showed high internal consistency for both mothers (0.84) and fathers (0.90). At wave 2 the Cronbach's alphas were 0.94 for mothers and 0.89 for fathers.

F→W-conflict was assessed by using the other half of the work-family conflict scale (Netemeyer et al. 1996). Respondents were asked the extent to which the following situations applied to them: 1) The demands of my family or partner interfere with my work activities; 2) I have to forgo work activities, because of the time demanded by my family life; 3) Things I want to do at work do not get done because of the demands my family or partner puts on me; 4) My family life disturbs my work responsibilities, such as being at work in time, finishing daily tasks and working overtime; 5) Family-related stress disturbs my ability to fulfil work-related obligations. Respondents could respond on a seven-point scale ranging from 1) totally disagree to 7) totally agree. Scores on each of the 5 items, ranging from 1 to 7, were averaged, where a higher score reflects higher *F→W-conflict*. Cronbach's alpha of this scale is 0.79 for mothers and 0.87 for fathers. At wave 2 the Cronbach's alphas were 0.92 for mothers and 0.93 for fathers.

Perceived parenting was assessed using the self-reported Parenting and Family Adjustment Scale (PAFAS) (Sanders et al. 2014). Parents were asked to assess several items related to perceived parenting and to indicate the extent to which these were applicable in the past four weeks. Parents could answer on a scale from 1 to 4, in which 1 means this aspect did not apply to them at all, and 4 indicates this strongly applied to them. They were

asked to consider these perceived parenting aspects in general regarding all their children. We used three subscales of the PAFAS, namely coercive discipline, positive encouragement, and the parent-child relationship.

Positive encouragement was assessed with the following items: 1) I give my child a treat, reward or fun activity for behaving well; 2) I praise my child when they behave well; 3) I give my child attention (e.g., a hug, wink, smile or kiss) when they behave well. At the first wave, the Cronbach's alpha was 0.68 for mothers and 0.57 for fathers. At wave 2, the Cronbach's alpha was 0.67 for mothers and 0.67 for fathers.

Coercive discipline was measured with the following items: 1) I shout or get angry with my child when they misbehave; 2) I try to make my child feel bad (e.g., guilt or shame) for misbehaving to teach them a lesson; 3) I spank (smack) my child when they misbehave; 4) I argue with my child about their behaviour/attitude; 5) I get annoyed with my child. At the first wave, the Cronbach's alpha was 0.61 for mothers and 0.62 for fathers. During wave 2, the Cronbach's alpha was 0.60 for mothers and 0.59 for fathers.

The parent-child relationship was measured with the following items: 1) I chat/talk with my child; 2) I enjoy giving my child hugs, kisses, and cuddles; 3) I am proud of my child; 4) I enjoy spending time with my child; 5) I have a good relationship with my child. At the first wave, the Cronbach's alpha was 0.76 for mothers and 0.55 for fathers. During wave 2, the Cronbach's alpha was 0.76 for mothers and 0.69 for fathers.

Parental educational level is assessed by asking respondents about the highest level of education they completed. We recoded this into a binary variable in which primary school, secondary school, or intermediate vocational training is considered lower/medium education and in which higher vocational training or (post) university degree is considered high education.

Control variables in the models in which we assess changes in F→W-conflict and W→F-conflict we control for whether a *child was born* in between the waves, as conflict between work and family generally increases when a new child is born (Byron 2005). We furthermore control for *changes in work hours* between the waves, and *changes in work hours of the partner* between the waves, as individuals with higher working hours, and with a partner with higher working hours on average experience more F→W-conflict and W→F-conflict (Byron 2005). In the models in which we assessed the relationship between W→F-conflict, F→W-conflict, and perceived parenting, we control for *parents' educational level and the presence of a younger sibling* in the household. We include this information because having younger children is related to a higher conflict between work and family (Allen & Finkelstein 2014) and the age of children is related to perceived parenting (Collins & Madsen 2009).

3.4 Data inspection

We assessed multicollinearity to test whether W→F-conflict and F→W-conflict could be added simultaneously in the same model. Despite the relatively high correlation between F→W-conflict and W→F-conflict of between 0.48 and 0.61 (in the different subsamples/waves), the variance inflation factor (VIF) was between 1.33 and 2.08 (in the different subsamples/waves), which is below the critical VIF value of 2.5 (Thompson et al. 2017). Therefore, we decided to include W→F-conflict and F→W-conflict simultaneously in our models.

We detected no univariate outliers for change in W→F-conflict and F→W-conflict. We assessed if there were multivariate outliers through Mahalanobis distance (De Maesschalck et al. 2000) and removed, depending on the model analyzed, between 1 and 6 cases. Comparing our models with and without outliers showed that with outliers included there was a significant association between W→F-conflict and more positive encouragement, which in our model in which outliers are excluded is only significant in the model in which the interaction with wave is included. In the model including outliers, the relationship between F→W-conflict and more coercive parenting is smaller in effect size and insignificant.

Lastly, we inspected the distribution of the main variables in our model and noticed that in almost half of the cases, parents value their parent-child relationship with a 4, the highest possible value. Therefore, in our preliminary analyses, we dealt with this outcome in two steps: first, we ran a logistic regression model on the likelihood of reporting a 4 or not, and after this, we ran a linear model on all respondents who did not report a value of 4. This is comparable to zero-inflated Poisson models, which account for the excess of zeros (Coxe et al. 2009). Given that these results were largely comparable to the regular linear model, for ease of interpretation, and conciseness we report the results from the normal linear models in our main analyses below.

3.5 Analyses

To examine change in F→W-conflict and W→F-conflict, we first descriptively show differences in levels of F→W-conflict and W→F-conflict at waves 1 and 2, and we report on the significance of these differences based on paired t-tests. Differences in changes of W→F-conflict/F→W-conflict by parents' sex and education were assessed with multilevel regression models. We ran multilevel models because respondents in our sample are not independent but nested within households (Snijders & Bosker 2012). We ran random intercept models in which the intercept is allowed to vary between families, but in which the slopes are constrained to be similar across families. We used the lme4 package in R to run our models (Bates et al. 2015).

To examine the association between W→F-conflict/F→W-conflict and perceived parenting, we ran a three-level multilevel model on measurements nested within individuals, and individuals nested within families. This is a multilevel model for repeated measures, which takes into account the nested structure of measurements within individuals, as well as individuals within households. In this model, we included an interaction term between W→F-conflict/F→W-conflict and wave to test our hypothesis that the negative associations between W→F-conflict/F→W-conflict and perceived parenting are stronger during wave 2 in comparison to wave 1. These models are random intercept, fixed slope models, in which the intercept is allowed to vary between individuals and waves.

3.6 Sample description

Table 1 displays the descriptives of the sample. During the first wave mothers in our sample mostly worked part-time and fathers worked full-time, and on average both fathers and

mothers reduced their working hours during the second wave. About half of the respondents are higher educated and the other half are low/medium educated. The 3-year-old child with whom the parents participated in the study was on average three and a half years old during the first wave and on average 4.7 years old (57 months) during the second wave.

Table 1: Sample descriptives of the working fathers and mothers selected in our sample

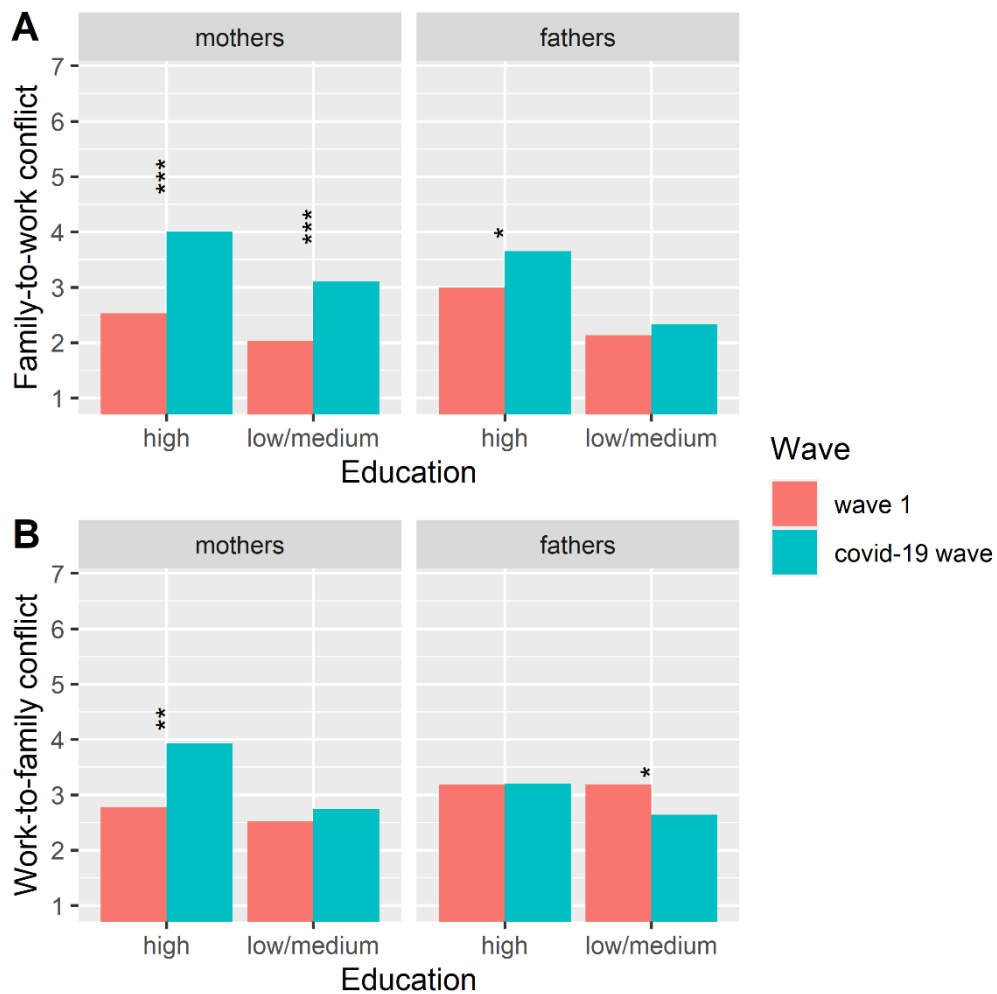
	Mothers				Fathers			
	Wave 1		Covid-19 wave		Wave 1		Covid-19 wave	
N	55		55		76		76	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Working hours	26.25	8.81	21.35	10.35	40.40	11.78	35.30	10.06
Working hours partner	39.23	15.72	31.72	14.32	21.26	13.54	14.86	12.79
Age child months	41.09	4.02	56.61	7.84	41.37	3.96	57.67	6.87
	N	%	N	%	N	%	N	%
Younger sibling=yes	20	36.36	25	45.45	30	39.47	38	50.00
Birth of a child=yes			10	18.18			18	23.68
Educational level= high	26	47.27	26	47.27	37	48.68	37	48.68
Educational level= low/medium	29	52.73	29	52.73	39	51.32	39	51.32

4. Results

4.1 Change in $F \rightarrow W$ -conflict and $W \rightarrow F$ -conflict between wave 1 and 2

As expected, based on H1a, our results indicated that $F \rightarrow W$ -conflict increased significantly between waves 1 and 2. However, these increases were not seen for all the subgroups of parents within our study (see Figure 1a). We found that $F \rightarrow W$ -conflict significantly increased among highly educated mothers (an increase of $M=1.5$ points), among lower/medium educated mothers (an increase of $M=1.1$), and highly educated fathers (an increase of $M=0.7$) (see Figure 1a). However, we did not find a significant increase among lower/medium educated fathers (an increase of $M=0.2$ point). Next, we also saw the expected increase in $W \rightarrow F$ -conflict (H1b) (see Figure 1B), but only for one subgroup of parents. We found that $W \rightarrow F$ -conflict increased significantly among highly educated mothers ($M=1.2$ points increase), while no significant increase was observed among lower/medium educated mothers and higher educated fathers. Contrary to our expectations, among lower/medium educated fathers we observed a significant decrease (of $M=-0.5$ points).

Figure 1: F→W-conflict (A) and W→F-conflict (B) at the two different waves, for fathers and mothers of different educational levels. Significance of difference between waves based on paired t-tests are displayed



Note: + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

We formulated two contrasting hypotheses concerning differences between mothers and fathers in the increase in F→W-conflict and W→F-conflict (H2a/b versus H3a/b). Our results, as depicted in Table 2, revealed that the increase in F→W-conflict was significantly weaker among fathers than among mothers ($B = -1.096$, $SE = 0.261$). Regarding W→F-conflict, we also found a significantly weaker increase among fathers than among mothers ($B = -1.181$, $SE = 0.299$). As such, our results provide support for the hypothesis that the increase would be stronger for mothers than for fathers (H2a/b and not H3a/b).

Secondly, we expected that the increase in F→W-conflict and W→F-conflict would be stronger among highly educated parents as opposed to lower/medium educated parents (H4). As shown in Table 2, we indeed found that the increase in F→W-conflict is weaker among lower/medium educated parents ($B=-0.528$, $SE=0.280$, borderline significant). Regarding W→F-conflict, we found a significantly weaker increase among lower/medium educated parents ($B=-0.787$, $SE=0.326$). Our results are thus in line with hypothesis 4.

Table 2: Multilevel regression model on change in F→W-conflict and W→F-conflict

	Change in family-work conflict		Change in work-family conflict	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Intercept	1.625***	0.289	1.381***	0.332
Parent= father	-1.096***	0.261	-1.181***	0.299
Education= lower/medium	-0.528+	0.280	-0.787*	0.326
Birth of a child= yes	-0.069	0.350	0.152	0.415
Change in work hours	-0.006	0.013	0.018	0.013
Change in work hours partner	0.005	0.009	-0.001	0.011
<i>R</i> ²	0.146		0.131	
N Families	72		73	
N Individuals	112		115	

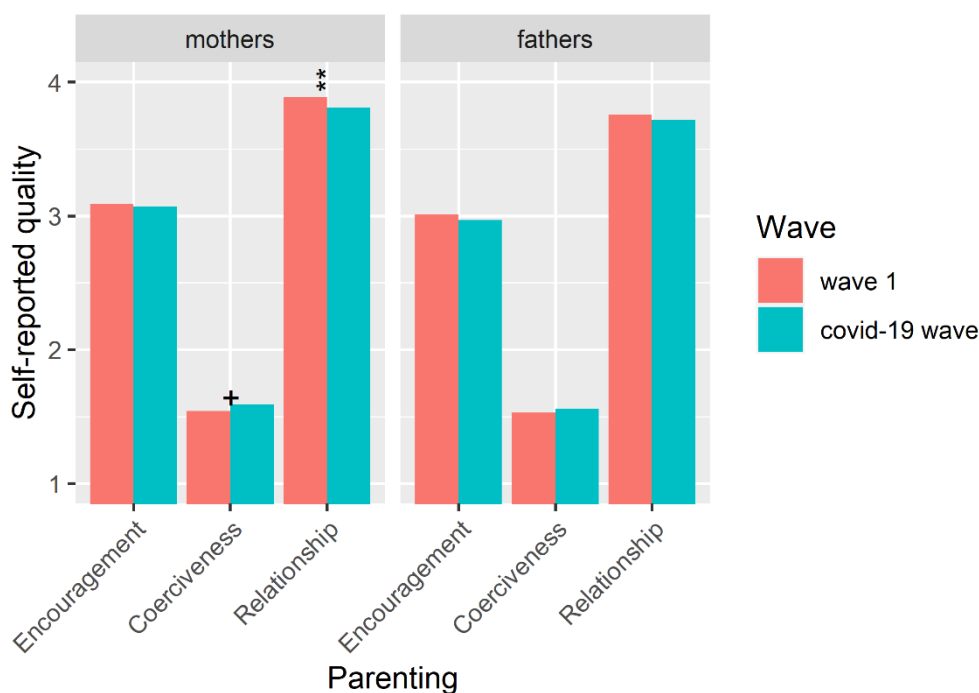
Note: + $p<0.1$, * $p<0.05$, ** $p<0.01$, *** $p<0.001$. The *R*² refers to the marginal *R*² for the fixed effects. 3 Respondents did not provide information about F→W-conflict but did about W→F-conflict, causing a different *n* in the two models.

4.2 Changes in perceived parenting

In Figure 2 we turn to our univariate descriptions for perceived parenting. During wave 1, fathers and mothers rated their positive encouragement on average relatively high ($M=3.1$ among mothers and $M=3.0$ among fathers on a 4-point Likert scale). In addition, most fathers and mothers indicated low levels of coercive parenting behaviors: on average, fathers and mothers scored $M=1.5$ on a 4-point Likert scale. The parent-child relationship, as aforementioned, was rated on average very highly by both fathers and mothers: on average mother scored a $M=3.9$ and fathers $M=3.7$ on a 4-point Likert scale.

In contrast to our expectations (H6), except for a slight increase in coerciveness among mothers (from $M=1.54$ to $M=1.59$, marginally significant) and a slight decrease of the mother-child relationship (from $M=3.89$ to $M=3.81$, significantly) we only saw very small changes in perceived parenting between wave 1 and 2 (See Figure 2). Among mothers, we saw no significant differences in positive encouragement (stable at $M=3.07$). For fathers, we saw no significant changes in their levels of positive encouragement, parental coerciveness, and the parent-child relationship.

Figure 2: Self-reported perceived parenting at the two different waves for mothers and fathers. Significance of differences between waves based on paired t-tests are displayed



Note: + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

4.3 The relationship between $F \rightarrow W$ -conflict, $W \rightarrow F$ -conflict with perceived parenting

Table 3 displays the results from the multilevel models on measurements nested within individuals, and individuals nested within families, to assess to what extent $F \rightarrow W$ -conflict and $W \rightarrow F$ -conflict are associated with perceived parenting. We hypothesized that higher levels of $F \rightarrow W$ -conflict/ $W \rightarrow F$ -conflict would be associated with less positive perceived parenting (H5). In models 1A, 2A, and 3A we assessed these associations combined for both waves. Regarding positive encouragement, we found no association with either $F \rightarrow W$ -conflict or $W \rightarrow F$ -conflict. Concerning coercive parenting, we found that greater $F \rightarrow W$ -conflict is related to more coercive parenting ($B=0.040$; $SE=0.015$, see Table 3, Model 2A), which is in line with hypothesis 5. When considering the parent-child relationship, we found that greater $W \rightarrow F$ -conflict is related to a less positive parent-child relationship ($B=-0.029$; $SE=0.012$, see Table 3 model 3A), which is in line with hypothesis 5. Our data revealed no association between $F \rightarrow W$ -conflict and the parent-child relationship. To summarize,

these findings partly support hypothesis 5 that greater levels of W→F-conflict and F→W-conflict are associated with less positive levels of perceived parenting.

In supplementary material (SM) Figure 1 to 4, we descriptively show the relationship between W→F-conflict/F→W-conflict and perceived parenting for fathers and mothers and both waves separately. These Figures show that the direction of the associations is comparable for fathers and mothers.

4.4 Differences in the associations between F→W-conflict/W→F-conflict and our perceived parenting measures across the waves

To assess hypothesis 7, that the negative associations between F→W-conflict/W→F-conflict and perceived parenting are stronger during wave 2 than during wave 1, we included an interaction term between F→W-conflict and W→F-conflict with wave (Table 3, model 1B, 2B and 3B). There are two main findings.

Firstly, the relationship between W→F-conflict and positive encouragement was borderline significantly more negative during the Covid-19 wave compared to the first wave ($B=-0.087$; $SE=0.046$, see Table 3 model 1B). Given that the main effect of W→F-conflict is positive ($B=0.076$, $SE=0.034$, see Table 3, Model 1B), this implies that during wave 1, parents who experience more W→F-conflict report more positive encouragement, while this association is slightly negative at wave 2 ($0.076-0.087=-0.011$). Although the association did become borderline significantly more negative during the waves, the finding is in contrast with our expectation given that the association between W→F-conflict and positive encouragement does not become significantly negative throughout the waves.

Secondly, the association between W→F-conflict and the parent-child relationship was borderline significantly more negative during the second wave ($B=-0.048$; $SE=0.025$, see Table 3, Model 3B). Given that the main effect of W→F-conflict on the parent-child relationship is not significant ($B=-0.002$, $SE=0.018$, see Table 3, Model 3B) and the interaction with wave 1 is negative, this implies that there was no association between W→F-conflict and the parent-child relationship in wave 1 and a negative association in wave 2. As the association did become borderline significantly more negative during the waves, these findings are in line with our hypothesis 7.

Besides these two findings, we found no significant interactions between W→F-conflict/ F→W-conflict and wave. Thus, in general, we found relatively little evidence for hypothesis 7.

Table 3: Three-level multilevel model for repeated measures on perceived parenting

	Positive encouragement						Coercive parenting behavior						Parent-child relationship												
	Model 1A		Model 1B		Model 2A		Model 2B		Model 3A		Model 3B		Model 1A		Model 1B		Model 2A		Model 2B		Model 3A		Model 3B		
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	
Intercept	3.064***	0.090	2.985***	0.114	1.479***	0.059	1.508***	0.072	4.021***	0.056	3.969***	0.065													
F→W-conflict	-0.013	0.025	-0.040	0.042	0.040**	0.015	0.029	0.025	-0.011	0.013	-0.020	0.023													
W→F-conflict	0.030	0.023	0.076*	0.034	-0.008	0.135	-0.008	0.019	-0.029*	0.012	-0.002	0.018													
Wave = second	-0.051	0.046	0.096	0.121	-0.006	0.027	-0.046	0.074	-0.045+	0.025	0.061	0.065													
Education = high	-0.100	0.068	-0.085	0.068	-0.012	0.045	-0.011	0.045	-0.062	0.043	-0.054	0.043													
Younger sibling = no	-0.045	0.069	-0.054	0.069	-0.044	0.041	-0.045	0.041	-0.020	0.039	-0.026	0.039													
Parent = mother	0.075	0.050	0.091+	0.046	0.001	0.039	-0.002	0.039	-0.104**	0.034	-0.115	0.036													
F→W-C* second wave			0.041	0.049			0.014	0.029			0.014	0.026													
W→F-C* second wave			-0.087+	0.046			0.001	0.027			-0.048+	0.025													
R2	0.028		0.040		0.040		0.040		0.105		0.115														
N Families	86		86		86		86		87		87														
N Individuals	127		127		126		126		127		127														
N Measurements	244		244		244		244		247		247														

Note: +p<0.1, *p<0.05, **p<0.01, ***p<0.001. The R2 refers to the marginal R2 for the fixed effects. Sample sizes differ per model due to different numbers of multivariate outliers.

4.5 *Increases in W→F-conflict and F→W-conflict but only for very few parents a deterioration in perceived parenting*

With only some small exceptions, we found substantial increases in W→F-conflict and F→W-conflict, while perceived parenting did not decrease much, and the association between conflict and perceived parenting did not intensify. In Appendix Figure 1 to 4 and Appendix Table 1 we took a closer look at the associations to see whether this pattern was indeed present for all parents in our sample. We saw that despite increasing levels of F→W-conflict and W→F-conflict, most parents were able to maintain relatively high levels of positive perceived parenting. However, there were some exceptions, as there is a small number of mothers who experienced both high levels of W→F-conflict/F→W-conflict and more coercive parenting during wave 2 (see Appendix Figure 1 and 2 middle panel) as well as relatively negative perceptions of the parent-child relationship during wave 2 (see Appendix Figure 1 and 2 right panel). Looking closer at the mothers who report relatively low perceived parenting at wave 2 (Appendix Table 1), the only thing that stands out is that they are working somewhat more hours (yet not significantly more) compared to mothers who do not report lower levels of perceived parenting. For fathers, we identified a subgroup who experienced high levels of W→F-conflict and relatively negative perceptions of the parent-child relationship in wave 2 (see Appendix Figure 2 left panel). When inspecting the group of fathers who report relatively low perceived parenting at wave 2 (Appendix Table 1), we found no differences between these fathers and the fathers who report no higher levels of perceived parenting, in for example working hours, working hours of the partner or number of children.

4.6 *Robustness checks*

To assess whether the increase in W→F-conflict/F→W-conflict between waves, and differences in changes between fathers and mothers and higher and lower educated parents, could be explained by differences in eligibility to bring one's children to emergency childcare, or by differences in parents' relative involvement in childcare, we ran additional models in which we control for these factors (see Appendix Table 2a and 2b). We found no significant association between eligibility to bring one's child(ren) to emergency childcare and changes in F→W-conflict/ W→F-conflict.

We found that an increase in relative involvement is associated with a stronger increase in F→W-conflict, but with a weaker increase in W→F-conflict (both borderline significant). Adding these control variables to our model did not change the intercept of the models, which indicates that they do not explain the significant increase in W→F-conflict/F→W-conflict, nor do they reduce the association of education and gender with changes in W→F-conflict/F→W-conflict (comparing Table 2 and Appendix Table 2a and 2b).

Furthermore, we assessed to what extent other factors might explain the associations between W→F-conflict/F→W-conflict and perceived parenting during the covid-19 wave. We included information on financial worries, mental health, and lack of social contacts/support that parents experienced during the lockdown. We found that parents who had more financial worries reported more coercive parenting behavior (borderline

significant, see Appendix Table 3b), that parents who reported better mental health reported a more positive parent-child relationship (see Appendix Table 3c), and that parents who reported to have a lack of social contacts reported a less positive parent-child relationship (see Appendix Table 3d). However, the inclusion of these factors did not significantly affect the earlier found associations between F→W-conflict and coercive parenting or between W→F-conflict and the parent-child relationship.

5. Conclusion and discussion

The Covid-19 lockdown, which started in March 2020 in the Netherlands, substantially changed the lives of families with young children, as schools and day-care facilities closed, and parents were asked to work from home as much as possible. Given these circumstances, our study firstly aimed to examine whether, to what extent, and for whom (by sex and educational attainment) work-to-family conflict (W→F-conflict) and family-to-work conflict (F→W-conflict) increased from the pre-Covid-19 period to the lockdown period. Second, our study aimed to examine whether and to what extent the associations between W→F-conflict/F→W-conflict and perceived parenting became stronger over time.

5.1 Increase in W→F-conflict as well as F→W-conflict

Our first finding is that both F→W-conflict and W→F-conflict increased during the lockdown compared to the period before the lockdown, but not for all parents: highly educated mothers experienced the strongest increase in conflict, followed by lower/medium educated mothers and higher educated fathers, while lower/medium educated fathers did not experience an increase, or even experienced a decrease in conflict. This pattern was found for both W→F-conflict as well as F→W-conflict. As expected, F→W-conflict increased to a stronger extent than W→F-conflict.

Interestingly, as we did not expect that conflict would become weaker for any of our respondents, our results showed that W→F-conflict decreased among lower/medium educated fathers. Reductions in work hours cannot explain this finding, given that we control for changes in working hours. A possible explanation might be that lower/medium educated parents generally hold more traditional views on gender roles (Pampel 2011), which could explain why specifically among the lower/medium educated couples, the additional childcare tasks that arose during the lockdown were especially shouldered by mothers. These lower/medium educated fathers thus did not have to juggle the combination of parenting and work and therefore did not experience increases in W→F-conflict.

These findings regarding the changes in conflict between work and family during the lockdown might be country-specific, as countries differed substantially in the support they offered to parents to combine work and family during the lockdown. For example, compared to other European countries, the Dutch government did not offer paid parental leave during the lockdown, which was offered in for example Belgium (Koslowski et al.

2020). Furthermore, in Denmark, the period in which schools and day-care centers closed was kept to a minimum, only a month in the spring and several weeks in the winter, which shortened the time in which parents had to combine work with home-schooling (Bariola & Collins 2021), which might have led to a smaller increase in conflict. Yet in other countries, such as Germany, schools for younger children remained closed for longer periods (Bariola & Collins 2021), and therefore the consequences for $W \rightarrow F$ -conflict and $F \rightarrow W$ -conflict might have been even stronger.

Regarding differences between fathers and mothers, other studies from other countries also found stronger increases in the conflict between work and family for mothers compared to fathers (Chung et al. 2020, Del Boca et al. 2020, Craig & Churchill 2020). However, the finding that $W \rightarrow F$ -conflict decreased among lower educated fathers could be specific to the Dutch context. The Netherlands is known for the high rate of part-time work among mothers (Dulk & Yerkes 2016), and many Dutch individuals still think women are better at raising young children than men (Thijs et al. 2019). Therefore, especially in the Netherlands, parenting tasks might have fallen disproportionately on the shoulders of mothers during the lockdown, which might explain why we found a strong increase in conflict for mothers, but a decrease among some men.

5.2 *The spill-over from $F \rightarrow W$ -conflict and $W \rightarrow F$ -conflict to perceived parenting*

The second aim of our study was to examine whether $F \rightarrow W$ -conflict and $W \rightarrow F$ -conflict spilled over into perceived parenting, and if these negative associations became stronger during the Covid-19 wave. We found that higher levels of $W \rightarrow F$ -conflict were associated with a less positive parent-child relationship. We found that higher levels of $F \rightarrow W$ -conflict were related to higher levels of coercive parenting. Contrary to our expectations, we found at wave 1 that parents who experienced more $W \rightarrow F$ -conflict reported more positive encouragement towards their children. It might be the case that parents who more strongly feel that work hinders them from fulfilling family tasks ($W \rightarrow F$ -conflict), try to compensate for not being able to fulfil these tasks by giving their child extra complements, treats, and attention for behaving well. During the second wave, we did not find this pattern, which might suggest that during the lockdown parents did not have the energy to give extra compliments when they experienced $W \rightarrow F$ -conflict. However, given that these findings are contrary to previous research findings regarding the relationship between $W \rightarrow F$ -conflict and parenting (Cooklin et al. 2016, Matejević & Đorđević 2019), readers should interpret these findings and our interpretation of these findings with caution.

Except for our borderline significant findings that the association between $W \rightarrow F$ -conflict and the parent-child relationship became more negative during the second wave and that the relationship between $W \rightarrow F$ -conflict and positive encouragement was less positive during the second wave, associations between conflict and our three measures of perceived parenting did not change significantly. Despite the strongly changed societal context and increased experiences of conflict, parents were able to maintain positive levels of perceived parenting. These findings could indicate that parents put great efforts into preventing the lockdown situation from harming their parenting. At the time of our data collection, the lockdown was relatively short-lived, and parents likely considered the

lockdown as a temporary situation and were therefore able to cope with the situation and to avoid a stronger spill-over from W→F-conflict/F→W-conflict to perceived parenting. At the time, there was also a strong feeling of country-wide solidarity and a feeling of a shared burden (Ridder et al. 2020), which might have given parents the motivation to cope with heightened feelings of work-family conflict. Possibly during the second lockdown that the Netherlands experienced, the spill-over from W→F-conflict/F→W-conflict to perceived parenting might have intensified, as this feeling of solidarity diminished and in general parents might have felt more exhausted. That said, our sample did reveal that there are some parents for whom heightened levels of W→F-conflict/F→W-conflict do coincide with a more negative parent-child relationship and increases in coercive parenting. We recommend future studies to examine these associations using larger samples.

Even though associations between W→F-conflict/W→F-conflict and perceived parenting did not deteriorate for most of our sample, this finding does not necessarily imply that other domains of parents' life were not affected. Albeit beyond the scope of the current paper, prior studies have revealed that higher levels of W→F-conflict/F→W-conflict are related to poorer health, lower subjective well-being, and more depression (Amstad et al. 2011). In addition, higher levels of W→F-conflict/F→W-conflict are also related to lower satisfaction at work and lowered work-related performance, as well as lowered satisfaction with family life (Amstad et al. 2011).

5.3 Limitations

Although the findings of this study provide relevant insight into parents' work and family conflict and perceived parenting before and during the first Covid-19 lockdown, some limitations need to be considered when interpreting our findings.

The first limitations refer to our measurement of perceived parenting. In our study, we made use of self-reported measures of perceived parenting, which might have led to socially desirable answers (Putnick 2019). In general, parents might have reported more positively about their own parenting behaviour. In addition, in particular those parents who experienced a lot of conflict and stress, might not have been able to accurately reflect on their parenting. If this is true, the associations we found in the current study might be an underestimation of the true associations. Although we had preferred to make use of observational data on parenting, the Covid-restrictions did not allow us to visit the families in their homes to collect these data. Also, the Cronbach's alphas for some of our parenting scales (coercive discipline for fathers at the Covid-19 wave, positive encouragement for fathers at wave 1, and the parent-child relationship at the Covid-19 wave) were below .60, which suggests poor internal consistency among the items of the different subscales. These Cronbach's alphas were largely comparable for fathers and mothers, yet slightly lower among fathers. However, these alpha values are comparable with previous research that used the same scales with mainly mothers (Morawska et al. 2019). In addition, studies have shown that using only a small number of items, such as in our study, generally results in lower Cronbach's alphas (Cortina 1993).

Secondly, there are some points of consideration regarding our sample and selection of respondents. We have to acknowledge that we used a convenience sample from one of the

larger city-regions in the Netherlands. As such, our findings might not be representative of all Dutch parents with a 3-year-old child. Given our focus on work-to-family and family-to-work conflict, our sample was restricted to parents who worked during both waves. This selection might have resulted in a sample of parents with high labour market attachment. It might be that some parents, feeling overwhelmed by family obligations during the lockdown, have quit their jobs or temporarily stopped working. As such, given that our sample focused on parents who were working during both waves, we might have excluded parents who experienced the highest levels of W→F-conflict/F→W-conflict and who already altered their work situation in an attempt to cope with the situation. In this light, the results shown in our article might underestimate increases in W→F-conflict and F→W-conflict and they might underestimate linkages with perceived parenting. Finally, this selection of working parents reduced especially the share of lower/medium educated mothers in our sample. Yet, this selection especially took place at wave 1 and was not due to a large drop of lower/medium educated mothers during the covid-19 wave. Interestingly, it were the higher educated mothers who were relatively more likely to stop working between both waves. Again, these findings suggest that our results are likely an underestimation of actual increases in W→F-conflict/F→W-conflict in the population, as highly educated mothers with the strongest increase in W→F-conflict/F→W-conflict might have already dropped out of the labour market during the Covid-19 wave. When interpreting our findings, readers should also note that our sample is relatively small, which limits the power of our statistical analyses. The latter might also explain some of our non-significant results. We therefore encourage future research to replicate our analyses with larger sample sizes.

Thirdly, the Covid-19 pandemic hit all our respondents. As such we did not have a control group of parents who did not experience the lockdown in the second wave of data collection. Therefore, we cannot conclude that the increases in W→F-conflict and F→W-conflict that we reported in this study are attributable to Covid-19 and its regulations.

5.4 Directions for future research

Our dataset consisted solely of two-parent residential families. In our sample, therefore, parents could at least to some extent share the burden of home-schooling and childcare, which generally is related to lower W→F-conflict (Moilanen et al. 2019). Our findings might therefore not be generalizable to single parents, where W→F-conflict/F→W-conflict might have increased even more and the spill-over to perceived parenting might have been more difficult to prevent. We also removed four families in which parents separated between waves from our sample, given that separating impacts individuals' lives tremendously above and beyond work-to-family and family-to-work conflict. Therefore, we likely selected parents with more stable relationships, among whom the consequences of Covid-19 are possibly weaker. Future research on the experiences of single parents would be useful.

In this study, we did not have information on whether respondents worked from home during the lockdown. However, parents who were able to work from home might show different patterns in comparison to those who were not. On the one hand, working from home might have increased W→F-conflict/F→W-conflict, because all activities had to take place at the same physical location. Parents working from home and home-schooling their

children at the same time might have constantly been confronted with the request from both contexts which might have also impacted their parenting. On the other hand, parents who worked from home were more flexible in fulfilling their work-related duties, allowing them to make time for their children in between performing work tasks and vice versa. Future studies could investigate whether findings are different for those parents who were and those who were not working from home.

5.5 *General conclusion*

In conclusion, findings from this study clearly showed that, amongst all mothers and highly educated fathers, the conflicts that parents experienced between fulfilling work duties and family responsibilities intensified in the period from before to during the first Covid-19 lockdown in the Netherlands. Overall, we did not find much evidence that associations between $W \rightarrow F$ -conflict and perceived parenting became stronger between the waves. This optimistically indicates that most parents were able not to let heightened levels of conflict interfere with their parenting. That said, for a small subsample of parents heightened levels of conflict did relate to more detrimental parenting. These findings suggest that it would be important, during future lockdowns, that measures are taken to alleviate the conflict between work and family roles. A cross-national comparison showed that countries differed in the extent of governmental support they provided to families during lockdown (Kosłowski et al. 2020). Paid parental leave during the lockdown was provided in several countries, and such measures may help to reduce work-family conflict during lockdowns. Also from the side of employers, more support for combining work and family roles, and in general greater compassion, could buffer against the conflict between work and family roles (Vaziri et al. 2020).

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Data availability

Researchers interested in using our data may contact the last author.

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Appendix

Figure A.1 F→W-conflict and perceived parenting for mothers

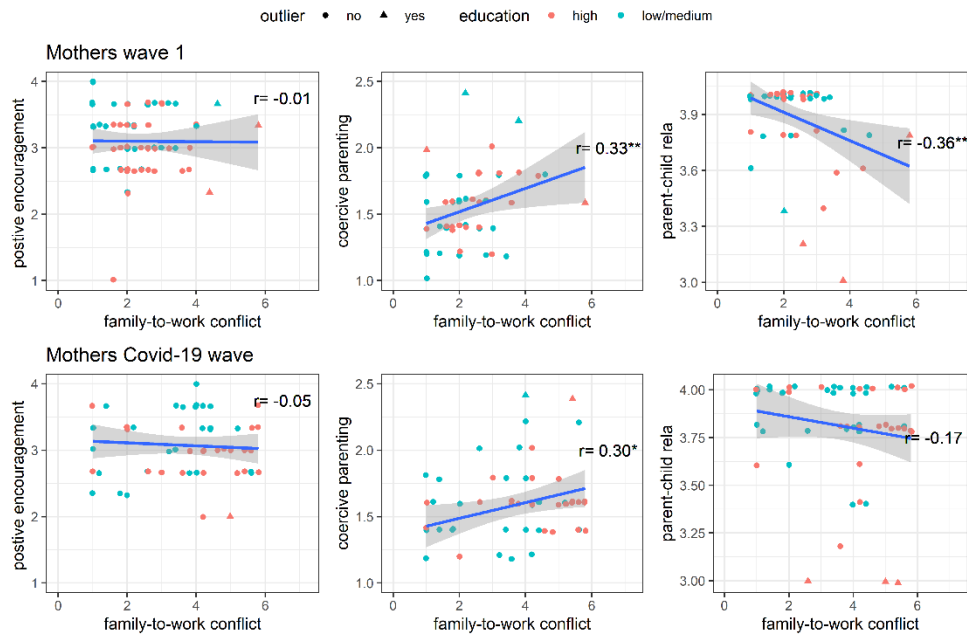


Figure A.2 W→F-conflict and perceived parenting for mothers

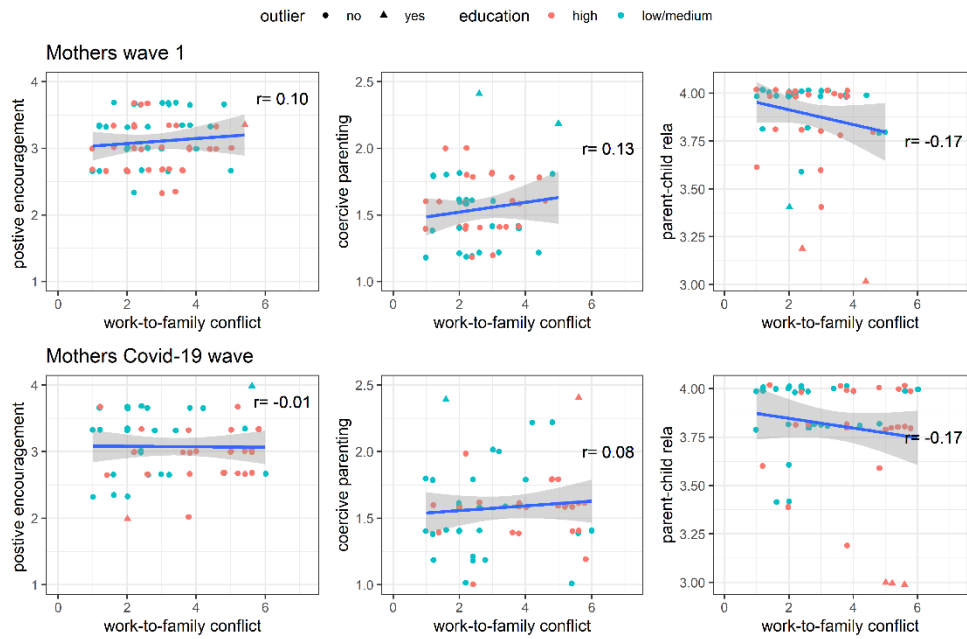


Figure A.3 F→W-conflict and perceived parenting for fathers

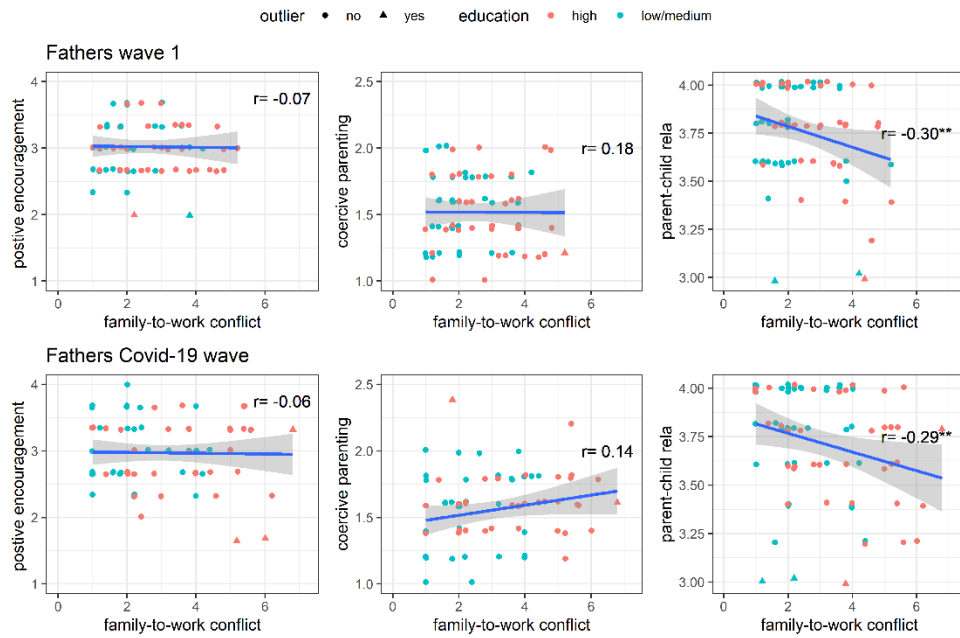


Figure A.4 W→F-conflict and perceived parenting for fathers

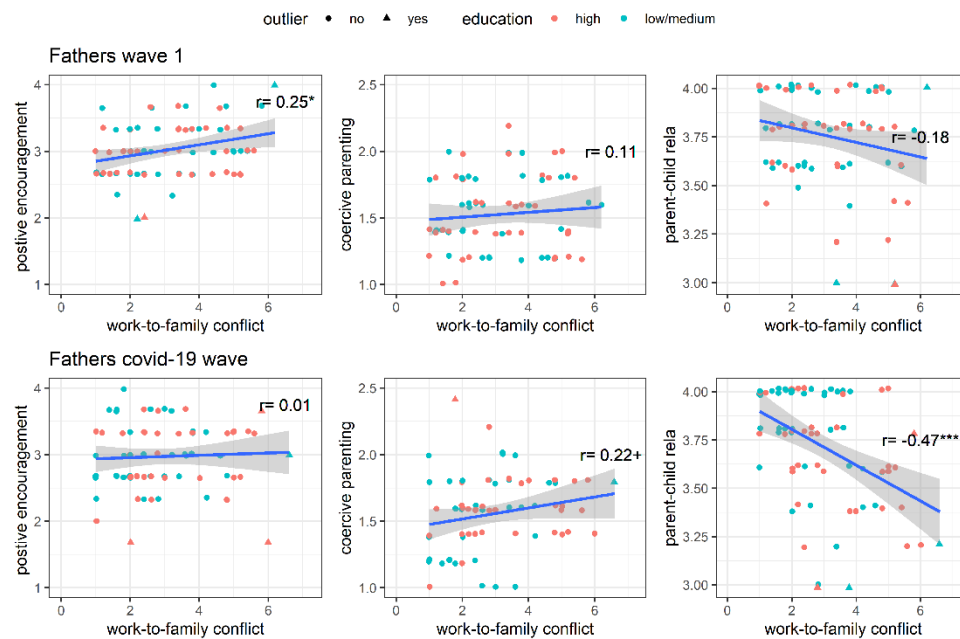


Table A.1: Characteristics of those respondents who reported relatively low perceived parenting at wave 2^a

		Relatively low perceived parenting at wave 2 ^a				Difference <i>p</i> -value
		No		Yes		
		Mean	SD	Mean	SD	
Mothers	Working hours	20.85	9.39	22.92	13.27	0.608
	Working hours partner	31.70	15.42	31.75	10.75	0.991
	F→W-conflict	3.43	1.68	4.18	0.93	0.047 *
	W→F-conflict	3.38	1.65	3.57	1.35	0.682
	Education (0=med/low, 1=high)	0.45	0.50	0.53	0.51	0.605
	Number of children	2.09	0.66	2.00	0.70	0.671
	N	42		13		
Fathers	Working hours	35.82	11.59	34.21	5.59	0.418
	Working hours partner	14.72	13.51	14.87	11.33	0.966
	F→W-conflict	2.79	1.47	3.47	1.59	0.088 +
	W→F-conflict	2.65	1.30	3.55	1.40	0.011 *
	Education (0=med/low, 1=high)	0.48	0.50	0.50	0.51	0.879
	Number of children	2.13	0.86	2.13	0.61	0.956
	N	52		24		

Note: ^a relatively low perceived parenting at wave 2 are characterized as either a parent-child relationship of 3.5 or lower coercive parenting of 2 or higher and positive encouragement of 2 and lower. Differences are tested with *t*-tests. +*p*<0.1, **p*<0.05, ***p*<0.01, ****p*<0.001.

Table A.2a: Multilevel regression model on change in F→W-conflict and W→F-conflict, controlling for the eligibility of using emergency childcare.

	Change in family-work conflict		Change in work-family conflict	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Intercept	1.554***	0.303	1.374***	0.346
Education= lower/medium	-0.559+	0.285	-0.789*	0.332
Parent= father	-1.069***	0.259	-1.178***	0.303
Birth of a child= yes	-0.086	0.356	0.149	0.418
Change in work hours	-0.008	0.013	0.017	0.014
Change in work hours partner	0.004	0.009	-0.002	0.012
Eligibility emergency childcare	0.302	0.363	0.032	0.427
R2	0.147		0.131	
N Families	72		73	
N individuals	112		115	

Note: Note: +*p*<0.1, **p*<0.05, ***p*<0.01, ****p*<0.001. The R2 refers to the marginal R2 for the fixed effects. The availability of emergency childcare is measured by asking respondents how they dealt with the closing of schools and day-care centers. One of the answer options was that the respondent or their partner worked in a crucial occupation and were allowed to bring their child to emergency childcare.

Table A.2b: Multilevel regression model on change in F→W-conflict and W→F-conflict, controlling for changes in relative involvement in childcare.

	Change in family-work conflict		Change in work-family conflict	
	B	SE	B	SE
Intercept	1.549***	0.292	1.490***	0.335
Education= lower/medium	-0.476+	0.281	-0.864**	0.325
Parent= father	-1.092***	0.257	-1.186***	0.299
Birth of a child= yes	-0.069	0.350	0.141	0.409
Change in work hours	-0.002	0.013	0.013	0.409
Change in work hours partner	0.002	0.009	0.001	0.011
Increase relative involvement	0.732+	0.480	-0.930+	0.557
R2	0.152		0.137	
N Families	72		73	
N individuals	112		115	

Note: + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The R2 refers to the marginal R2 for the fixed effects. The increase in relative involvement is measured by asking respondents how they divide care for the children with their partner, where higher values indicate the parent does a task more often and lower values that the partner does the task more often. We examined changes between waves, where higher values indicate the parent became relatively more involved.

Table A.3a: Multilevel regression models on perceived parenting among mothers and fathers during the Covid-19 wave, without additional controls.

	Positive encouragement Covid-19 wave		Coercive parenting behavior Covid-19 wave		Parent-child relationship Covid-19 wave	
	B	SE	B	SE	B	SE
Intercept	3.019***	0.129	1.373***	0.074	4.081***	0.086
F→W-conflict	0.013	0.037	0.049*	0.021	-0.007	0.020
W→F-conflict	-0.002	0.038	0.008	0.022	-0.053**	0.020
Education = high	-0.106	0.094	-0.039	0.054	-0.072	0.055
Younger sibling = no	0.011	0.095	0.033	0.052	-0.076	0.053
Parent = mother	0.033	0.079	-0.024	0.047	0.124*	0.046
R2	0.013		0.074		0.145	
N individuals	122		122		125	
N Families	83		83		87	

Note: Note: + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; F→W-conflict, Family-work-conflict; W→F-conflict, Work-family-conflict. The R2 refers to the marginal R2 for the fixed effects. Sample sizes differ per model due to different numbers of multivariate outliers.

Table A.3b: Multilevel regression models on perceived parenting among mothers and fathers during the Covid-19 wave, while controlling for financial worries.

	Positive encouragement Covid-19 wave		Coercive parenting behavior Covid-19 wave		Parent-child relationship Covid-19 wave	
	B	SE	B	SE	B	SE
Intercept	3.024***	0.135	1.339***	0.089	4.095***	0.086
F→W-conflict	0.013	0.037	0.044*	0.021	-0.006	0.022
W→F-conflict	-0.002	0.038	0.012	0.021	-0.055**	0.020
Education = high	-0.101	0.096	-0.026	0.054	-0.077	0.055
Younger sibling = no	0.011	0.095	0.034	0.053	-0.074	0.053
Parent = mother	0.032	0.078	-0.017	0.046	0.119*	0.046
Financial worries	-0.001	0.001	0.002+	0.001	-0.001	0.001
R2	0.014		0.096		0.149	
N individuals	122		122		125	
N families	83		83		87	

Note: + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; F→W-conflict, Family-work-conflict; W→F-conflict, Work-family-conflict. The R2 refers to the marginal R2 for the fixed effects. Sample sizes differ per model due to different numbers of multivariate outliers. Financial worries were measured by questioning parents how large they considered the chance that due to Covid-19 crisis their income would become too low to provide in their basic needs (scale 1 to 10).

Table A.3c: Multilevel regression models on perceived parenting among mothers and fathers during the Covid-19 wave, while controlling for financial worries.

	Positive encouragement Covid-19 wave		Coercive parenting behavior Covid-19 wave		Parent-child relationship Covid-19 wave	
	B	SE	B	SE	B	SE
Intercept	3.018***	0.378	1.540***	0.221	3.578***	0.205
F→W-conflict	0.021	0.038	0.047*	0.022	0.003	0.021
W→F-conflict	0.003	0.038	0.007	0.021	-0.048*	0.020
Education = high	-0.137	0.096	-0.042	0.056	-0.077	0.054
Younger sibling = no	-0.000	0.094	0.031	0.052	-0.067	0.050
Parent = mother	0.013	0.081	-0.036	0.048	0.148**	0.048
Mental health	-0.005	0.078	-0.037	0.044	0.116**	0.042
R2	0.019		0.083		0.207	
N individuals	121		121		124	
N families	82		82		86	

Note: + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; F→W-conflict, Family-work-conflict; W→F-conflict, Work-family-conflict. The R2 refers to the marginal R2 for the fixed effects. Sample sizes differ per model due to different numbers of multivariate outliers. Mental health is measured by questions regarding how the parents felt in the last 7 days, including nervous (reversed), down (reversed), calm, sad (reversed) and happy, on a scale from 1 to 5, where higher values indicate they more often felt this way.

Table A.3d: *Multilevel regression models on perceived parenting among mothers and fathers during the Covid-19 wave, while controlling for lack of social contact and social support.*

	Positive encouragement Covid-19 wave		Coercive parenting behavior Covid-19 wave		Parent-child relationship Covid-19 wave	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Intercept	2.899***	0.201	1.366***	0.117	4.278***	0.126
F→W-conflict	0.018	0.037	0.051*	0.022	-0.006	0.020
W→F-conflict	0.003	0.038	0.009	0.022	-0.053**	0.020
Education = high	-0.130	0.096	-0.047	0.056	-0.072	0.055
Younger sibling = no	-0.005	0.095	0.030	0.053	-0.061	0.053
Parent = mother	0.006	0.081	-0.031	0.049	0.143**	0.046
Lack social contact and social support	0.071	0.111	0.001	0.067	-0.127*	0.064
R2	0.022		0.077		0.176	
N individuals	121		121		124	
N families	82		82		86	

Note: + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; F→W-conflict, Family-work-conflict; W→F-conflict, Work-family-conflict. The R2 refers to the marginal R2 for the fixed effects. Sample sizes differ per model due to different numbers of multivariate outliers. Lack of social contacts and social support is based on 11 questions regarding whether the parent during the lockdown amongst others misses good friends, misses people they can trust, misses people to support them, ranging from no (1), somewhat (2) and yes (3), where higher values indicate a greater lack of social contact.

Information in German

Deutscher Titel

Die Bedeutung von Work-to-Family-Conflict und Family-to-Work-Conflict für das wahrgenommene Erziehungsverhalten und die Eltern-Kind-Beziehung vor und während des ersten COVID-19-Lockdowns

Zusammenfassung

Fragestellung: Die Studie verfolgt zwei Ziele: Erstens wird geprüft, ob, in welchem Umfang und für wen (nach Geschlecht und formalem Bildungsniveau differenziert) der Work-to-Family-Conflict (W→F-Conflict) und der Family-to-Work-Conflict (F→W-Conflict) während des ersten Lockdowns im Vergleich zum Zeitraum vor Beginn der COVID-19-Pandemie zugenommen haben. Zweitens wird geprüft, ob und in welchem Umfang negative Zusammenhänge zwischen W→F-Conflict sowie F→W-Conflict und die wahrgenommene Erziehung (Unterstützung, machtvolle Durchsetzung und Eltern-Kind-Beziehung) zugenommen haben.

Hintergrund: Während des ersten Lockdowns in der COVID-19-Pandemie wurde von Eltern verlangt, dass sie sowohl Kinderbetreuung und Homeschooling übernehmen als auch ihren beruflichen Verpflichtungen nachkommen. Vor diesem Hintergrund überprüft die vorliegende Studie, wie sich sowohl W→F-Conflict sowie F→W-Conflict und die wahrgenommene Erziehung verändert und die jeweiligen Beziehungen zueinander entwickelt haben

Methode: Paneldaten aus zwei Erhebungswellen von 55 Müttern und 76 Vätern, die zur ersten Welle erwerbstätig waren und ein dreijähriges Kind hatten, wurden mithilfe von Mehrebenen-Modellen ausgewertet.

Ergebnisse: Am stärksten nahm der F→W-Conflict sowie W→F-Conflict bei Müttern mit hoher Bildung, gefolgt von Müttern mit niedriger/mittlerer Bildung und Vätern mit hoher Bildung zu. Bei Vätern mit niedriger/mittlerer Bildung hingegen war keine Zunahme oder sogar eine Abnahme zu beobachten. Zwar ließen sich ein paar Zusammenhänge zwischen W→F-Conflict sowie F→W-Conflict und wahrgenommener Erziehung beobachten, diese fielen aber während der COVID-19-Pandemie nicht konsistent stärker aus. Obwohl sich das gestiegene Konfliktniveau kaum auf das wahrgenommene Erziehungsverhalten von Müttern und Vätern auswirkte, zeigen unsere Analysen, dass sich zumindest bei einigen Eltern die Konfliktzunahme negativ auf die wahrgenommene Erziehung auswirkte.

Schlussfolgerung: Abgesehen von einigen nennenswerten Ausnahmen führte die Zunahme von F→W-Conflict sowie W→F-Conflict zu keiner Verschlechterung der wahrgenommenen Erziehung. Offenbar konnten die meisten Eltern verhindern, dass die gestiegenen Vereinbarkeitsprobleme ihr Erziehungsverhalten beeinflussten.

Schlagwörter: COVID-19, Vereinbarkeitsprobleme, Geschlechterungleichheiten, Erziehung, bildungsbezogene Ungleichheiten, die Niederlande

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