

**Working from home during a pandemic and its effect on gender  
equality: Work-family conflict and work-family guilt among  
working parents**

*master thesis*

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### **Abstract**

The current study examines how the first intelligent lockdown during the COVID-19 crisis in 2020 affected a sample of 1048 Dutch working adults on the work-family domain. It was expected that women and parents would report a larger increase in time spent on childcare and household tasks and a larger decrease in work hours during the COVID-19 crisis compared to before the COVID-19 crisis than men and nonparents; that parents and mothers would experience higher levels of work-family conflict during the COVID-19 crisis than nonparents and fathers; and that parents would experience higher levels of work-family guilt during the COVID-19 crisis than nonparents, with mothers experiencing more work-to-family guilt than fathers and fathers experiencing more family-to-work guilt than mothers. Results in congruence with the expectations were that parents reported spending relatively more time on tasks, a larger decrease in work hours and higher levels of work-family conflict and work-family guilt during the COVID-19 crisis than nonparents. Women reported spending relatively more time on household chores and teaching at home, and mothers reported higher levels of work-family conflict and work-family guilt than fathers. Contrary to the expectations, men reported spending relatively more time on grocery shopping during the COVID-19 crisis than women, and there were no gender differences in decrease in work hours, type of conflict and type of guilt. The main takeaway of this study is that women and parents experienced the most negative consequences of the intelligent lockdown on the work-family interface, which could indicate a step back in terms of gender equality and emancipation.

*Keywords:* work-family conflict, work-family guilt, work hours, tasks, gender equality, COVID-19, parenthood

## **Introduction**

The COVID-19 virus continues to be a large, external stressor, impacting almost every aspect of life (e.g., Cruickshank & Shaban, 2020; Haleem & Javaid, 2020; Tull et al., 2020). Research has found that previously existing work-life balances and task divisions in couples have become imbalanced during the COVID-19 outbreak. The aim of this thesis is to examine how the intelligent lockdown in the first months of the COVID-19 crisis affected a sample of Dutch working adults, and especially how it affected them psychologically, by way of looking at work-family conflict and work-family guilt. This builds on and is complementary to existing sociological research by Yerkes and colleagues (2020) in which gender equality during the COVID-19 crisis was examined. In the present study, an answer to the following research question is pursued: How is the division of household tasks and working hours within couples impacted by the COVID-19 crisis, how are work-family conflict and work-family guilt experienced – and what are notable gender differences and differences between parents and nonparents?

### **The impact of COVID-19 on task division and equality**

Having both men and women in the workforce has become the standard over the past few decades (Centraal Bureau voor de Statistiek [CBS], 2020; Tijdens, 2006). The traditional view of men as the family's breadwinner and women as homemakers has been abandoned, as women are participating in paid employment and men are taking on more childcare and household tasks (Cipollone, Patacchini, & Vallanti, 2014; Bünning, 2015; European Commission, 2018; Van den Brakel & Merens, 2018). In the Netherlands, around 70% of women participate in paid labor (CBS, 2020; Organization for Economic Collaboration and Development [OECD], 2017). But even in this country, generally viewed as progressive, there is still a long road ahead in terms of gender equality (European Institute for Gender Equality [EIGE], 2019). Dutch women on average still work fewer hours than men, with over 60% of women in part-time employment (as opposed to 20% of men (OECD, 2017)), and also take on the majority of unpaid work such as childcare and household tasks (Van den Breemer, 2019; OECD, 2019). These factors contribute to several negative consequences for Dutch women, such as limited financial independence (OECD, 2017) and fewer career benefits (e.g., Aarntzen, 2020; Barreto, Ryan, & Schmitt, 2009; Ellemers, 2014.).

Why do women still work less than men and still experience these negative consequences, when the division of work, childcare and household tasks are viewed as mostly determined by personal choice (Stephens & Levine, 2011)? This is, among other things,

thought to be due to the normative pressure for women to prioritize their family over work, and for men to be the breadwinner for their family; the stereotype that women are better parents and/or homemakers than men; and the fact that women do not get rewarded as much for the time and energy they spend on their work as men (Aarntzen, 2020; Aarntzen et al., 2019; Aarntzen, Derks, van Steenbergen, & van der Lippe, *under review*). The role prioritization model formulated by Haines and Stroessner (2019) suggests that, due to prevalent gender stereotyping, women are expected to ‘care’ and prioritize their family over their work, and men are expected to ‘provide’ and prioritize their work over their family. The model explains that women in the workforce and men caring for the family have been accepted in modern society, as long as they do not *neglect* their expected ‘primary role’. “*A professional woman might be applauded for contributing to meet a family's financial needs, so long as doing so does not harm her ability to be a good mother*” (Haines & Stroessner, 2019).

Recent research by Yerkes and colleagues (2020) demonstrates that some of these still-prevailing gender differences may have been exacerbated by the current COVID-19 crisis. The first coronavirus infection in the Netherlands was confirmed on February 27<sup>th</sup>, 2020 (Dijkers, 2020), and roughly two weeks later, measures were implemented across the country to combat the spread of the virus. This took effect in the form of an ‘intelligent lockdown’: the mandate in the Netherlands was to work from home as much as possible, in order to decrease interpersonal contact and commuting (Ministerie van Algemene Zaken, 2020). Other measures were: the closing of schools and childcare facilities for children of parents with ‘non-essential’ occupations, the closing of public establishments such as restaurants and barbershops, and a ban on gatherings until June 1<sup>st</sup>. Although schools, childcare facilities and most of the public establishments were allowed to open again around the second half of May, for many people the intelligent lockdown was a big adjustment that came with many challenges, including but not limited to a reorganization of their work and family life (Nederlands Jeugdinstuut [NJI], 2020). It might be stated that previously existing work-life balances became imbalanced as a result of the COVID-19 measures, because most people had to work from home and, for parents, children were at home instead of at school. This had the potential to upend any pre-established task division.

Aforementioned research by Yerkes et al. (2020) among Dutch parents revealed that fathers took on more childcare and household tasks (e.g., grocery shopping, cooking, cleaning, caring for children) than before the COVID-19 crisis, but mothers still took on the majority of these tasks, and most of the mothers said they spent more time on these tasks than

their partners did. Most people saw a reduction in their paid working hours, due to reasons such as having difficulty working at home while caring for their children. However, mothers reported to have made more concessions regarding their working hours than fathers; they reduced their working hours and worked on times deviating from their regular hours more so than fathers did. These findings are in line with the previously mentioned role prioritization model, as it seems that women prioritized their family and men prioritized their work during the intelligent lockdown. In the current sample it is expected that task division and time spent on paid work during the COVID-19 crisis followed a similar, traditionalizing path:

**H1:** On average, an increase in reported time spent on childcare and household tasks since the COVID-19 crisis started (compared to before the pandemic) is observed; however, this is more so the case for parents and women than for nonparents and men, respectively.

**H2:** On average, a decrease in reported time spent on paid work since the COVID-19 crisis started (compared to before the pandemic) is observed; however, this is more so the case for parents than for nonparents, and this effect is stronger for mothers than for fathers.

### **Work-family balance and conflict**

The concept of work-family balance, and the role prioritization model too, are rooted in social role theory (Eagly, 1987). Social role theory states that everyone has various life roles, for example being a spouse, a parent, a member of the workforce, or a member of a community. Every role has boundaries, which may take multiple forms. For example, many people have ‘work boundaries’ in place in such a way that they keep work at their workplace, and away from their homes and private lives. Some role boundaries may be more permeable than others, and overlapping roles occur often (Ashforth, Kreiner, & Fugate, 2000; Clark, 2000; Frone, 2003). All these roles have to be combined and balanced in one’s life – and when an imbalance occurs, this may lead to conflict. Hence the most widely held definition of work-family balance is “*a lack of conflict or interference between work and family roles*” (Frone, 2003). It may seem obvious that people’s work-family balance is disrupted when, due to a pandemic, most aspects of life suddenly happen in one place: at home. When people work from home, it may be more difficult for them to maintain clear boundaries between work and family life, as opposed to people who work away from home. It has been demonstrated that working from home increases the blurring of boundaries between work and family life

(Crosbie & Moore, 2004; Felstead & Henseke, 2017; Sullivan, 2000), causing negative effects such as the inability to ‘switch off’ and unwind after a workday (Felstead & Henseke, 2017).

Research has illustrated that blurred or more vague boundaries between work and family life – that is, when work activities and nonwork activities are integrated rather than separated (Allen, Cho, & Meier, 2014; Kreiner, 2006; Nippert-Eng, 1996) – increase work-family conflict (Kossek, Lautsch, & Eaton, 2006; Kossek, Ruderman, Braddy, & Hannum, 2012; Matthews, Barnes-Farrell, & Bulger, 2010); which has been reported for college students as well (school-home conflict; Van Steenbergen, Ybema, & Lapierre, 2017). Work-family conflict has been defined as “*a type of role conflict that arises when joint role pressures from work and family domains are experienced as incompatible in some respect, as a result of which participation in one role is made more difficult by virtue of participation in the other role*” (Greenhaus & Beutell, 1985). This conflict can occur in two directions: work impeding on family life (work-to-family conflict) and family life impeding on work (family-to-work conflict) (Frone, 2003). By referring to ‘work-family conflict’, the entirety and bidirectionality of the construct is implied; when mentioning a specific type of conflict, the terms ‘work-to-family conflict’ and ‘family-to-work conflict’ are used.

What does the COVID-19 crisis mean for experiencing work-family conflict? It is assumed that parents experience more work-family conflict than nonparents, because parents have an additional life role compared to nonparents, which would make a work-family balance harder to maintain during an intelligent lockdown when the children are at home. Furthermore, it is predicted that in the current sample, mothers experience on average more work-family conflict than fathers during the pandemic. This hypothesis is derived from the report by Yerkes et al. (2020), which revealed that, during the pandemic, mothers took on more household tasks, cared more for the children who were at home and compromised on their paid working hours more than fathers.

**H3:** On average, a greater amount of experienced work-family conflict during the COVID-19 crisis is observed for parents than for nonparents; this effect is stronger for mothers than for fathers.

In terms of gender differences in work-to-family and family-to-work conflict specifically, research before the COVID-19 crisis indicated that people tend to adjust their lives in order to experience minimal, or at least manageable, levels of work-family conflict (Aarntzen, 2020; Jansen, Kant, Kristensen, & Nijhuis, 2003). Because men and women are

expected to have different priorities, it is possible that the type of conflict that they end up experiencing is different. Women (experience normative pressure to) prioritize their family, and thus adjust their lives by putting childcare and household tasks first, or reducing their working hours, for example (Jansen et al., 2003). But because they have a job as well, women averagely experience the most conflict in the work domain. This could explain why research has revealed that women typically experience more family-to-work conflict than men (Allen & Finkelstein, 2014; Blanch & Aluja, 2012; Shockley & Singla, 2011). Men (experience normative pressure to) prioritize their work, and, on average, arrange their lives in such a way that they work more than their partners (Baxter, Hewitt, & Haynes, 2008; CBS, 2020) and work the same amount or sometimes even more hours after they have children, compared to before becoming a parent (Alejandro Perez, van den Brakel, & Portegijs, 2018; Endendijk, Derks, & Mesman, 2018). These are a few reasons why research has found that men averagely experience the most conflict in the family domain, and it could explain why men typically experience more work-to-family conflict than women (Blanch & Aluja, 2012; Cinamon & Rich, 2002; Shockley & Singla, 2011).

In conclusion, one could distinguish gender differences regarding the different types of work-family conflict before the COVID-19 crisis. However, as the pandemic came into play, those differences might disappear. The intelligent lockdown made it difficult for people to combine work and family domains, as pre-established arrangements to reduce experienced conflict were obstructed. As stated, under normal circumstances women generally experience more family-to-work conflict than men. But with the external pressure of the lockdown forcing women to focus more on their children than before, because the children were at home and needed attention regarding home-schooling (Yerkes et al., 2020), women might have experienced high levels of work-to-family conflict during the intelligent lockdown. Similarly, men generally experience more work-to-family conflict than women. But as they worked from home and had to do this in the same environment as their family, and take on more childcare and household tasks than before the COVID-19 crisis (Yerkes et al., 2020), one might expect that men experienced high levels of family-to-work conflict during the intelligent lockdown. To sum up, gender differences as to who experiences work-to-family and work-to-family conflict may not be so clear during the intelligent lockdown. As it is uncertain what to expect, the current research approaches the relationship between gender and work-family conflict in an exploratory manner.

### **Work-family guilt**

High levels of work-family conflict have several consequences for both men and women, such as less life and job satisfaction, more psychological strain, higher burnout risk, and higher depression (Aarntzen, 2020; Kossek & Ozeki, 1998; McNall, Nicklin, & Masuda, 2010). Besides, work-family conflict may also induce feelings of guilt – this can be towards family as well as work. Guilt is defined as a “*moral and self-conscious emotion*” (Baumeister, Stillwell, & Heatherton, 1994; Morris & Keltner, 2000; Tangney, Stuewig, & Mashek, 2007) “*that arises from societal disapproval of specific behaviors*” (Ilies, Savani, Peng, & Dimotakis, 2013; Lindsay-Hartz, 1984). When guilt is specifically experienced as an emotional response to work-family conflict, it is called ‘work-family guilt’ and has been defined by Botsford-Morgan and King (2012) as “*an emotion that can occur when one's behavior violates the norms of how one believes they should balance the demands of work and family responsibilities and adversely affects an individual*”. Corresponding with work-family conflict, work-family guilt is a bidirectional construct and can occur in the form of work-to-family guilt and family-to-work guilt (Korabik, 2015).

Judge, Ilies and Scott (2006) found that work-family conflict predicts higher feelings of guilt; Livingston and Judge (2008) demonstrated that both work-to-family conflict and family-to-work conflict predict feelings of guilt. Not unlike experiencing conflict, experiencing guilt is a reason to change the ‘layout’ of one’s life, in order to reduce those negative emotions; work-family guilt influences choices that parents make regarding their work-life balance (Aarntzen, 2020; Ketelaar & Au, 2003). As the COVID-19 crisis disturbed life, what can be identified regarding the experience of work-family guilt?

When examining gender differences, consensus in research seems to be that women generally experience higher levels of guilt than men. This may be due to the stereotype that women are more interpersonally sensitive than men, and therefore more prone to feelings of guilt (Kochanska, Gross, Lin, & Nichols, 2002; Korabik, 2015; Kubany & Watson, 2003; Zahn-Waxler, Kochanska, Krupnick, & McKnew, 1990). However, in regard to work-family guilt specifically, several studies indicate that men and women experience similar levels of work-family guilt. According to Gonçalves, Sousa, Santos, Silva & Korabik (2017), Korabik (2015) and Martinez et al. (2011), men and women tend to be very similar in the degree of work-family guilt they experience and the things they feel guilty about. When exploring the influence of parenthood, research has demonstrated that parents tend to feel guilty often, more so than nonparents, and mostly when their children are young (Borelli, Nelson, River, Birken, & Moss-Racusin, 2016; Korabik, 2017). This presumably is because parents feel they do not



spend as much time as they would like with their children (Korabik, 2017; Martinez, Carrasco, Aza, Blanco & Espinar, 2011). While working from home during the intelligent lockdown, this perceived shortcoming could be exacerbated even more for parents, as they have to do their work duties while their children are around. It is therefore expected in the current research that parents experience a greater amount of work-family guilt than nonparents.

Zooming in even further, on the two different types of work-family guilt, one finds that mothers generally experience higher levels of feeling guilty towards their family about how work interferes with care tasks (work-to-family guilt) than fathers (e.g., Aarntzen, 2020; Aarntzen, Derks, van Steenberg, Ryan, & van der Lippe, 2019; Borelli et al., 2016). This aligns with Haines and Stroessner's (2019) theory stating that women are largely expected to work and contribute financially to their household, but are not 'allowed' to prioritize their work over their family. Balancing these double standards may lead women to experience more work-to-family guilt than men (Bui, 1999; Korabik, 2015). For family-to-work guilt on the other hand, research on gender differences is still sparse. Gonçalves et al. (2017) suggest that there are no gender differences between work-to-family and family-to-work guilt; Livingston and Judge (2008) suggest that men experience more family-to-work guilt than women, but only if they have traditional views on gender roles. Lack of research on this specific type of guilt inspires to explore gender differences in the current study (Bulger, 2013). It is probable that normative pressure regarding what someone should prioritize can make someone feel guilty (Collins, 2020; Korabik, 2015); the current research therefore predicts that, during the COVID-19 crisis, mothers experience more guilt about how their work interferes with their family (work-to-family guilt) than fathers, and fathers experience more guilt about how their family interferes with their work (family-to-work guilt) than mothers. During the pandemic, women may have prioritized their family more so than men did (Yerkes et al., 2020), and may therefore feel guilty when their work interferes with that. On the other hand, men are still expected to prioritize their work, but must do so in a homeworking situation while their children are around, and as a result might not get as much work done as they would like, which generates feelings of guilt.

**H4:** On average, a greater amount of experienced work-family guilt during the COVID-19 crisis is observed for parents than for nonparents. Mothers are predicted to experience more work-to-family guilt than fathers, and fathers are predicted to experience more family-to-work guilt than mothers.

## Method

### Participants and procedure

A total of  $N = 1050$  working adults, who were in a relationship for longer than six months and lived together, filled in a survey that was available online from May 27 until June 8, 2020. The survey was in Dutch and divided in two ‘routes’ as to not make it too long; participants were randomly divided over these routes. The participants were predominantly of Dutch or partly Dutch ethnicity (95.6%) and consisted of 759 women, 289 men and 2 nonbinary persons. Because the latter group was too small to draw any statistical conclusions from, it was excluded from the analyses, leaving a total amount of participants of  $N = 1048$ . Age of the participants ranged from 19 to 82 ( $M_{total} = 39.4$ ,  $SD = 9.43$ ;  $M_{men} = 42.0$ ,  $SD = 9.60$ ;  $M_{women} = 38.4$ ,  $SD = 9.16$ ). Of all participants, 751 reported having children, of which 704 had children living with them at home, and 572 of them had at least one child under the age of 12 at home.

As this was not a controlled experiment, it was impossible to guarantee equal group sizes. As a result of this, sample sizes were unequal in analyses, because the data contained more women than men and more parents than nonparents. Especially the group of men without children became quite small, being  $N = 55$  in the analyses for Hypothesis 2,  $N = 26$  in the analyses for Hypothesis 3 and  $N = 25$  in the analyses for Hypothesis 4. These group sizes were too small in contrast with the other groups, often 3 to 7 times smaller. This problem was accounted for in the analyses, as described in the Statistical Analyses section in Results.

### Measures

The survey consisted of a number of questions in Dutch, mostly regarding how life was experienced since the start of the COVID-19 crisis and during the intelligent lockdown. Items that were used for the current research can be found in Appendix A, and the survey as a whole is enclosed separately. Relevant for the current research were some demographic variables, such as whether people had children at home, whether they were employed, and whether they had what is considered an ‘essential occupation’.

For the current research, when referring to ‘parents’, participants who had at least one child living with them at home were considered in the analyses. When referring to ‘nonparents’, participants who did not have children living with them at home were considered. The latter could still be parents, but in reality only  $N = 46$  participants were parents but did not have children living at home with them. For the sake of the current

research and investigating the effects of the intelligent lockdown, a distinction was made between participants who had children living at home with them and participants who did not.

When referring to ‘before the COVID-19 crisis’, this means that participants were asked to answer questions with their life before the COVID-19 crisis started in mind, which is the period of time up until March 16<sup>th</sup>, 2020. When referring to ‘during the COVID-19 crisis’ or ‘since the COVID-19 crisis started’, this means that participants were asked to answer questions with their life since the COVID-19 crisis and intelligent lockdown started in mind, which is the period from March 16<sup>th</sup>, 2020 until the moment participants filled out the survey (end of May/beginning of June 2020).

For the *task division* hypothesis (H1), people were asked whether they spent more or less time on tasks since the COVID-19 crisis started in comparison to before the COVID-19 crisis (Likert from 1 – *I spend a lot less time* to 7 – *I spend a lot more time*). The tasks considered in this thesis are: Household chores – Grocery shopping – Teaching at home and/or helping children with homework – Playing with/entertaining children – Childcare.

For the *working hours* hypothesis (H2), participants were asked how many hours they spent on paid work per week before the COVID-19 crisis started, and how many hours they actually spent on paid work per week during the COVID-19 crisis.

For the *work-family conflict* hypothesis (H3), participants were presented six statements about work-family conflict that they answered regarding the period of time since the COVID-19 crisis started. The items were derived from the work-to-family and family-to-work conflict scales designed by Netemeyer, Boles, & McMurrian (1996). Answers were given on a Likert scale from 1 – *Completely disagree* to 7 – *Completely agree*. Three statements were about work-to-family conflict, and three about family-to-work conflict. A principal axis factor analysis was conducted on the 6 items with varimax rotation, in order to determine whether the data suggested a distinction between the two constructs ‘work-to-family conflict’ and ‘family-to-work conflict’ (Field, 2013). The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, KMO = .815. The scree plot showed an inflexion that would justify retaining 2 factors; Table 3 (Appendix B) shows the factor loading after rotation. The items that clustered on the same factor suggested that factor 1 represents work-to-family conflict ( $\alpha = .92$ ), consisting of three items (e.g., ‘My responsibilities at work have negatively impacted my life at home’) and that factor 2 represents family-to-work conflict ( $\alpha = .92$ ), also consisting of three items (e.g., ‘Because of care tasks at home, my work-related activities were disturbed’).

For the *work-family guilt* hypothesis (H4), participants were presented six statements about work-family guilt that they answered regarding the period of time since the COVID-19 crisis started. The items were derived from the work-family guilt scale (WFGS) originally developed by McElwain (2002; 2008). Answers were given on a Likert scale from 1 – *Completely disagree* to 7 – *Completely agree*. Three statements were about work-to-family guilt, and three about family-to-work guilt. The same principal axis factor analysis with varimax rotation was conducted here (KMO = .824), in order to determine whether the data suggested a distinction between the two constructs ‘work-to-family guilt’ and ‘family-to-work guilt’. The scree plot here also suggested retaining 2 factors; Table 4 (Appendix B) shows the factor loading after rotation. The items that clustered on the same factor suggested that factor 1 represents family-to-work guilt ( $\alpha = .92$ ), consisting of three items (e.g. ‘I feel guilty because I constantly have to take time off work to tend to matters happening at home’) and that factor 2 represents work-to-family guilt ( $\alpha = .87$ ), also consisting of three items (e.g. ‘I feel bad [towards my family] because I constantly have to be busy with work’).

For Hypotheses 2, 3 and 4, the covariate *essential occupation* was controlled for in the analyses. Since the pandemic started and ‘essential occupations’ such as jobs in healthcare, food services and education were suddenly highly emphasized in news reports, journalists and researchers brought renewed attention to women generally being disproportionately represented in those essential occupations (CBS, 2020; Yerkes et al., 2020). According to Yerkes et al., 56% of Dutch mothers and 34% of Dutch fathers have an essential job. To test whether the same trend could be observed in the current sample, Pearson’s chi-square test was conducted, revealing indeed a significant association between gender and essential occupation,  $\chi^2(1) = 8.72, p = .003$ . Based on the odds ratio, the odds of having an essential occupation within the current sample were 1.62 times higher for women than for men; 42% of women and 31% of men had an essential job. The contingency table is displayed below (Table 1). If not corrected for essential occupation, gender effects could be repressed or found effects for gender could be due to women being more likely to have an essential occupation (Field, 2013).

Table 1

*Contingency table for gender and essential occupation*

Gender	Essential occupation		Total
	No	Yes	

Female	Count	319	233	552
	Expected Count	337.2	214.8	552
	% within gender	57.8%	42.2%	100%
	% within essential occupation	67.3%	77.2%	71.1%
	% of total	41.1%	30.0%	71.1%
	Standardized Residual	-1.0	1.2	
Male	Count	155	69	224
	Expected Count	136.8	87.2	224
	% within gender	69.2%	30.8%	100%
	% within essential occupation	32.7%	22.8%	28.9%
	% of total	20.0%	8.9%	28.9%
	Standardized Residual	1.6	-1.9	
Total	Count	474	302	776
	Expected Count	474	302	776
	% within gender	61.1%	38.9%	100%
	% within essential occupation	100%	100%	100%
	% of total	61.1%	38.9%	100%

## Design

The design of the current study is cross-sectional. For Hypothesis 1, the dependent variable is ‘difference in amount of time spent on task’, and the independent variables are gender and whether participants had (a) child(ren) at home (parents/nonparents; hereafter ‘parenthood’). Hypothesis 2, 3 and 4 have within-subjects variables (working hours before and during the COVID-19 crisis, work-to-family conflict vs. family-to-work conflict, and work-to-family guilt vs. family-to-work guilt respectively), and independent variables for these hypotheses are gender and parenthood. In the analyses for these hypotheses was also controlled for whether participants had an essential occupation (covariate).

## Results

### Statistical analyses

All statistical analyses were performed in the Statistical Program for Social Sciences (SPSS), version 26. To test Hypothesis 1, one-sample t-tests were conducted first to determine whether participants spent more or less time on tasks since the COVID-19 crisis started in comparison to before the COVID-19 crisis. Secondly, five one-way ANOVAs were

conducted to assess whether men and women or parents and nonparents differed in time spent on these tasks.

To test Hypotheses 2, 3 and 4, two-way repeated measures ANCOVAs were conducted. For Hypothesis 2, the within-subjects variable ‘work hours’ consisted of the two levels ‘work hours before the COVID-19 crisis’ and ‘work hours during the COVID-19 crisis’. For Hypothesis 3, the within-subjects variable ‘conflict’ consisted of the two levels ‘work-to-family conflict’ and ‘family-to-work conflict’. For Hypothesis 4, the within-subjects variable ‘guilt’ consisted of the two levels ‘work-to-family guilt’ and ‘family-to-work guilt’. Hypothesis 2, 3 and 4 all had the same independent variables, namely gender and parenthood, and the same covariate, namely whether participants had an essential occupation.

As mentioned before, sample sizes were unequal in all analyses, causing problems especially for Hypotheses 2, 3 and 4, as interactions between gender and parenthood were predicted. With women and parents overrepresented in the sample, men without children consistently formed the smallest group, increasing the risk of a Type II error (i.e., finding an outcome that is actually not there). As a result of this, it was decided not to test interaction effects between gender and having children at home, because there was the sample size was too small to make reliable inferences from the data. To still be able to look at the effects of the COVID-19 crisis on parents in particular, the focus for the second part of those three hypotheses was only on parents. The first parts of the hypotheses were tested with both parents and nonparents, and for the second part of the hypotheses analyses were run again, but with the sample limited to parents only. This group was not compared against nonparents.

### **Hypothesis 1 – Time spent on childcare and household tasks**

Five tasks (household chores, grocery shopping, teaching at home, playing with children and childcare) were analysed to determine whether participants reported to have spent more or less time on these tasks than they did before the COVID-19 crisis started. Not every participant answered every item, as they were only presented with the tasks they indicated to have in their life; hence the differing sample sizes (Table 2). One-sample t-tests indicated that time spent on these five tasks differed significantly from the value 4 (which signified ‘I spend an equal amount of time on this task [since the COVID-19 crisis started]’). Concurrent with the hypothesis, participants reported a significant increase in time spent on four out of five tasks, namely household chores ( $M = 4.63$ ,  $SD = 1.23$ ),  $t(877) = 15.2$ ,  $p < .001$ ; teaching at home ( $M = 5.95$ ,  $SD = 1.33$ ),  $t(296) = 25.4$ ,  $p < .001$ ; playing with children ( $M = 5.40$ ,  $SD = 1.25$ ),  $t(511) = 25.3$ ,  $p < .001$ ; and childcare ( $M = 4.68$ ,  $SD = 1.07$ ),  $t(516) =$

14.5,  $p < .001$ . For the fifth task, grocery shopping, participants reported a significant decrease in time spent ( $M = 3.68$ ,  $SD = 1.36$ ),  $t(862) = -6.86$ ,  $p < .001$ , which makes time spent on this particular task contradictory to the first part of the hypothesis.

Subsequently, five two-way analyses of variance (ANOVA) were conducted to compare differences in time spent on the five tasks since the COVID-19 crisis started (*task*) between men and women and between parents and nonparents. Parenthood was considered only for the first two tasks, as the other three tasks are child-related and thus nonparents obtained no scores for these items. The five tasks and their mean scores and standard deviations for each group are displayed in Table 2. Significant effects were found for three of these five tasks.

For the task 'household chores', a small significant main effect of gender was found,  $F(1, 874) = 8.93$ ,  $p = .015$ ,  $\eta_p^2 = .007$ ; the means (Table 2) indicate that both men and women reported an increase in time spent on household chores during the COVID-19 crisis as compared to before the COVID-19 crisis, but women in this sample reported a larger increase than men. Secondly, a small significant main effect of parenthood was found,  $F(1, 874) = 9.79$ ,  $p = .002$ ,  $\eta_p^2 = .011$ ; parents reported a larger increase in time spent on household chores since the COVID-19 crisis started compared to nonparents. The results for this task are in accordance with the hypothesis.

For the task 'grocery shopping', a small significant main effect of gender was found,  $F(1, 859) = 7.67$ ,  $p = .006$ ,  $\eta_p^2 = .009$ . The means (Table 2) indicate that whereas women reported to have done less grocery shopping during the COVID-19 crisis as compared to before the COVID-19 crisis, men reported to spend about the same amount of time on grocery shopping. This result is not in accordance with the hypothesis, as the expectation was that women would report a larger increase in time spent on the task during the COVID-19 crisis than men, and there was no significant effect for parenthood.

For the task 'teaching at home/helping with homework', a small significant main effect of gender was found,  $F(1, 294) = 11.3$ ,  $p = .001$ ,  $\eta_p^2 = .037$ ; the means (Table 2) indicate that both men and women reported an increase in time spent on teaching at home and/or helping with homework during COVID-19 crisis as compared to before the COVID-19 crisis, but women reported a larger increase than men. This result is in accordance with the hypothesis.

For the tasks 'playing with children' and 'childcare', no significant effects were found. The absence of significant main effects for gender were not in accordance with the hypothesis, as women did not indicate to have spent significantly more time on these tasks

than men. However, the means (Table 2) indicate that both men and women reported an increase in time spent on playing with children and childcare during the COVID-19 crisis as compared to before the COVID-19 crisis.

Table 2

*Reported relative time spent on five childcare and household tasks (during the COVID-19 crisis as compared to before the COVID-19 crisis), for men and women with and without child(ren) at home.*

Task		men, child(ren)	men, no child(ren)	women, child(ren)	women, no child(ren)
Household chores (washing, cooking, cleaning)	N	179	68	410	221
	M	4.55	4.25	4.81	4.48
	(SD)	(1.02)	(1.13)	(1.34)	(1.16)
Grocery shopping	N	174	66	404	219
	M	3.99	3.77	3.63	3.50
	SD	(1.09)	(0.99)	(1.39)	(1.49)
Teaching at home and/or helping children with homework	N	90	-	205	-
	M	5.57	-	6.12	-
	(SD)	(1.40)		(1.26)	
Playing with children, entertaining them	N	156	-	352	-
	M	5.25	-	5.49	-
	(SD)	(1.12)		(1.28)	
Childcare (feeding, washing, taking to bed)	N	158	-	355	-
	M	4.68	-	4.70	-
	(SD)	(0.88)		(1.13)	

*Note.* Items were measured on a Likert scale from 1 = ‘I spend way less time on this than before the COVID-19 crisis’ to 7 = ‘I spend a lot more time’, with 4 = ‘I spend an equal amount of time’.

### **Hypothesis 2 – Difference in work hours before and during COVID-19**

A two-way repeated-measures analysis of covariance (ANCOVA) was conducted to compare difference in work hours before and during the COVID-19 crisis (*work hours*) between men and women and between parents and nonparents, while controlling for having an essential occupation (covariate). In accordance with the first part of the hypothesis, a medium significant main effect of work hours was found,  $F(1, 766) = 64.1, p < .001, \eta_p^2 =$



.077. This indicates that in general, participants experienced a reduction in work hours; they spent less time on paid work during the COVID-19 crisis ( $M = 32.7$ ,  $SE = .46$ ) compared to before the COVID-19 crisis ( $M = 36.9$ ,  $SE = .38$ ).

There was a medium significant effect of gender on work hours,  $F(1, 766) = 72.4$ ,  $p < .001$ ,  $\eta_p^2 = .086$ ; indicating that overall (before and during the COVID-19 crisis) women worked on average significantly less hours ( $M = 31.9$ ,  $SE = .39$ ) compared to men ( $M = 37.8$ ,  $SE = .61$ ). Furthermore, there was a small significant effect of parenthood on work hours,  $F(1, 766) = 18.7$ ,  $p < .001$ ,  $\eta_p^2 = .024$ ; indicating that overall (before and during the COVID-19 crisis) parents worked significantly less hours ( $M = 33.4$ ,  $SE = .40$ ) compared to nonparents ( $M = 36.3$ ,  $SE = .59$ ). There was no significant main effect of having an essential occupation on overall work hours,  $F(1, 766) = 1.70$ ,  $p = .19$ ,  $\eta_p^2 = .002$ .

Concurrent with the hypothesis, there was a small significant interaction between parenthood and work hours,  $F(1, 766) = 17.0$ ,  $p < .001$ ,  $\eta_p^2 = .022$ , indicating that parents showed a larger reduction in work hours during the COVID-19 crisis (work hours pre-COVID-19:  $M = 36.2$ ,  $SE = .40$ ; work hours during COVID-19:  $M = 30.5$ ,  $SE = .49$ ) compared to nonparents (work hours pre-COVID-19:  $M = 37.7$ ,  $SE = .60$ ; work hours during COVID-19:  $M = 34.9$ ,  $SE = .74$ ). So, as can be seen in Figure 1, the effect of the COVID-19 crisis on work hours is larger for parents than for nonparents.

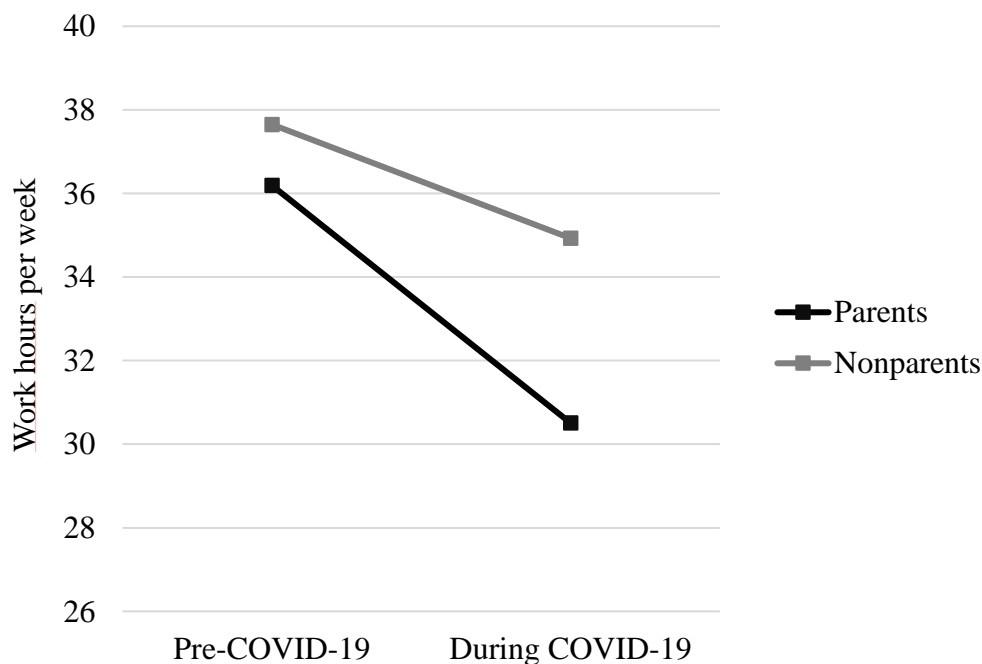


Figure 1. Average work hours per week before and during the COVID-19 crisis, for parents and nonparents.

The interaction between work hours and the covariate, essential occupation, was significant,  $F(1, 766) = 15.8, p < .001, \eta_p^2 = .020$ , indicating that participants with an essential occupation showed a smaller reduction in work hours (work hours pre-COVID-19:  $M = 34.5, SE = .53$ ; work hours during COVID-19:  $M = 31.6, SE = .64$ ) compared to participants with a nonessential occupation (work hours pre-COVID-19:  $M = 35.8, SE = .43$ ; work hours during COVID-19:  $M = 30.3, SE = .51$ ). So, as can be seen in Figure 2, the effect of the COVID-19 crisis on work hours was larger for participants without an essential occupation than for participants with an essential occupation.

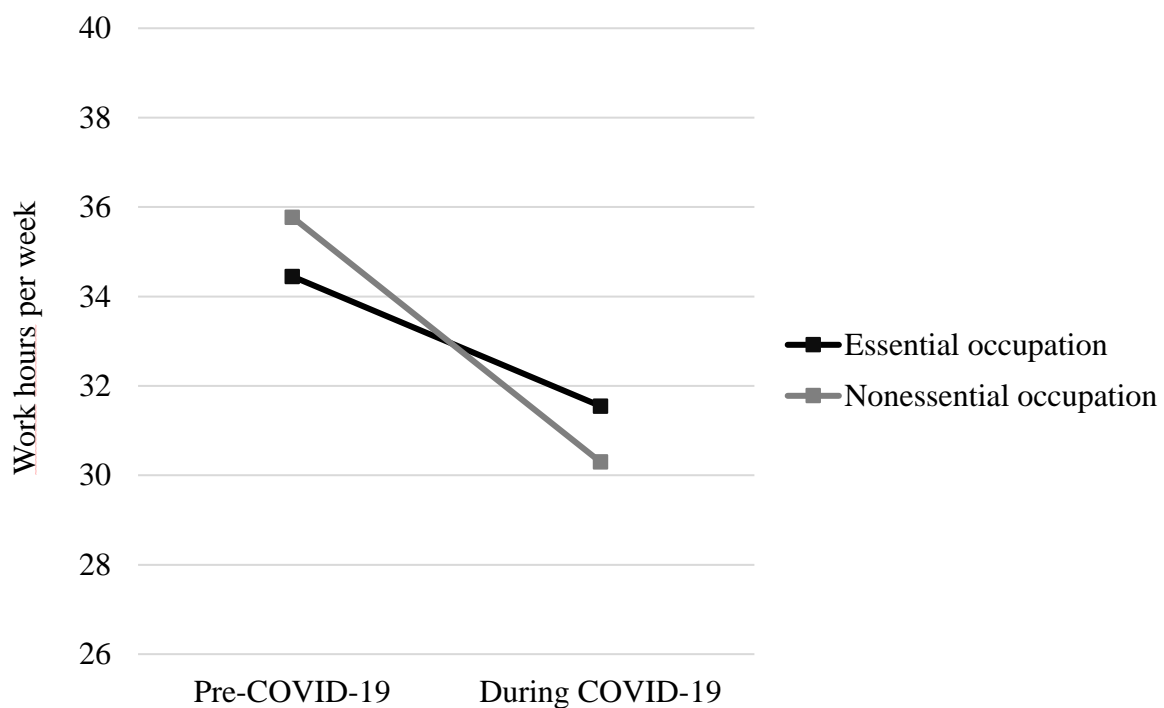


Figure 2. Average work hours per week before and during the COVID-19 crisis, for participants with and without an essential occupation.

The predicted interaction between gender and work hours was not significant,  $F(1, 766) = 3.33, p = .07, \eta_p^2 = .004$ , indicating that there was no significant difference between men and women in the reduction of work hours due to the COVID-19 crisis. Because the unbalanced sample did not allow for reliable interpretation of interaction effects of gender and parenthood, the effect of gender on work hours was examined for parents only. These results yielded a medium significant main effect of gender on work hours,  $F(1, 581) = 84.5, p < .001, \eta_p^2 = .13$ , indicating that mothers worked significantly less hours overall (before and during

the COVID-19 crisis;  $M = 30.4$ ,  $SE = .44$ ) compared to fathers ( $M = 37.1$ ,  $SE = .57$ ). However, there was no significant interaction between gender and work hours for this group,  $F(1, 581) = .59$ ,  $p = .44$ ,  $\eta_p^2 = .001$ , indicating that fathers and mothers did not experience a significantly different reduction in work hours during the COVID-19 crisis.

### **Hypothesis 3 – Work-family conflict**

A two-way repeated-measures analysis of covariance (ANCOVA) was conducted to compare work-to-family conflict and family-to-work conflict during the COVID-19 crisis (*conflict*) between men and women and between parents and nonparents, while controlling for having an essential occupation (covariate). There was a small significant main effect of conflict,  $F(1, 372) = 13.1$ ,  $p < .001$ ,  $\eta_p^2 = .034$ , indicating that in general, participants experienced more conflict about their family interfering with work ( $M = 2.99$ ,  $SE = .11$ ) than about their work interfering with their family ( $M = 2.77$ ,  $SE = .10$ ) during the COVID-19 crisis.

The between-subjects effects revealed one large significant main effect of parenthood on conflict,  $F(1, 372) = 138.0$ ,  $p < .001$ ,  $\eta_p^2 = .271$ ; indicating that parents reported a significantly higher score on both types of work-family conflict ( $M = 3.86$ ,  $SE = .094$ ) compared to nonparents ( $M = 1.90$ ,  $SE = .15$ ) during the COVID-19 crisis. This is in line with the first part of Hypothesis 3; however, there was no significant main effect of gender on conflict,  $F(1, 372) = 1.27$ ,  $p = .26$ ,  $\eta_p^2 = .003$ .

Continuing with the exploratory analyses of the two types of conflict and their effects, the results revealed a small interaction effect between gender and type of conflict,  $F(1, 372) = 5.53$ ,  $p = .019$ ,  $\eta_p^2 = .015$ , indicating that, during the COVID-19 crisis, women experienced both types of conflict about equally (work-to-family conflict:  $M = 2.98$ ,  $SE = .11$ ; family-to-work conflict:  $M = 2.96$ ,  $SE = .11$ ), while men experienced more conflict about their family interfering with their work ( $M = 3.01$ ,  $SE = .18$ ) than about their work interfering with their family ( $M = 2.56$ ,  $SE = .17$ ). So, as can be seen in Figure 3, while men and women in the current sample experienced similar levels of family-to-work conflict, women experienced more work-to-family conflict than men.

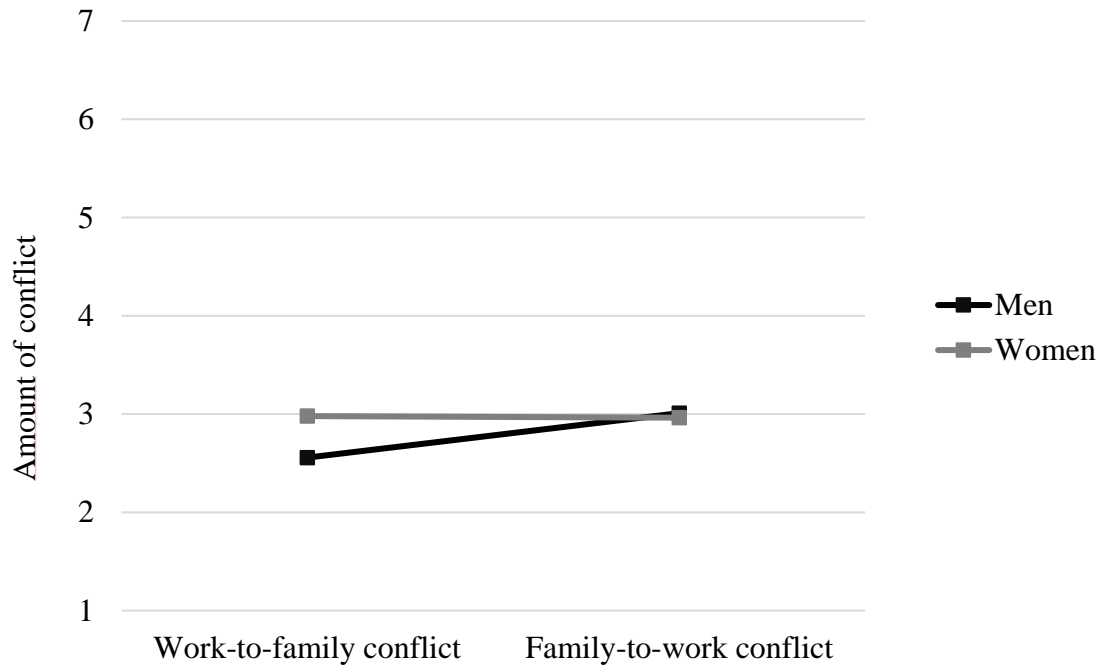


Figure 3. Average scores of men and women on work-to-family conflict and family-to-work conflict during the COVID-19 crisis.

There was also a medium significant interaction between parenthood and type of conflict,  $F(1, 372) = 56.1, p < .001, \eta_p^2 = .131$ , indicating that parents experienced both types of conflict more strongly (work-to-family conflict:  $M = 3.38, SE = .11$ ; family-to-work conflict:  $M = 4.34, SE = .11$ ) compared to nonparents (work-to-family conflict:  $M = 2.17, SE = .17$ ; family-to-work conflict:  $M = 1.631, SE = .18$ ) during the COVID-19 crisis. Moreover, the difference between parents and nonparents was especially large when it came to conflict about their family interfering with work (see Figure 4).

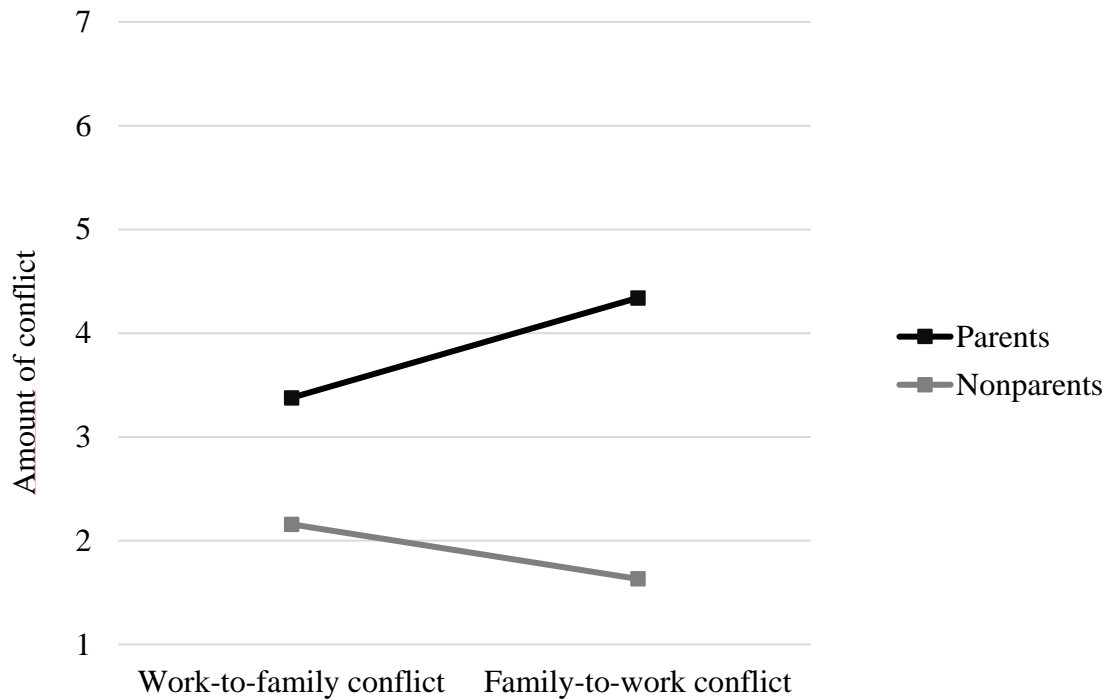


Figure 4. Average scores on work-to-family conflict and family-to-work conflict during the COVID-19 crisis, for parents and nonparents.

The interaction between the covariate essential occupation and type of conflict was significant,  $F(1, 372) = 8.63, p = .004, \eta_p^2 = .023$ , indicating that during the COVID-19 crisis, participants with an essential occupation experienced similar levels of work-to-family conflict ( $M = 3.44, SE = .15$ ) and family-to-work conflict ( $M = 3.57, SE = .18$ ); but participants with a nonessential occupation experienced less work-to-family conflict ( $M = 2.90, SE = .11$ ) than family-to-work conflict ( $M = 3.53, SE = .14$ ). So, as can be seen in Figure 5, the difference between participants with and without an essential occupation was apparent on work-to-family conflict (see Figure 5).

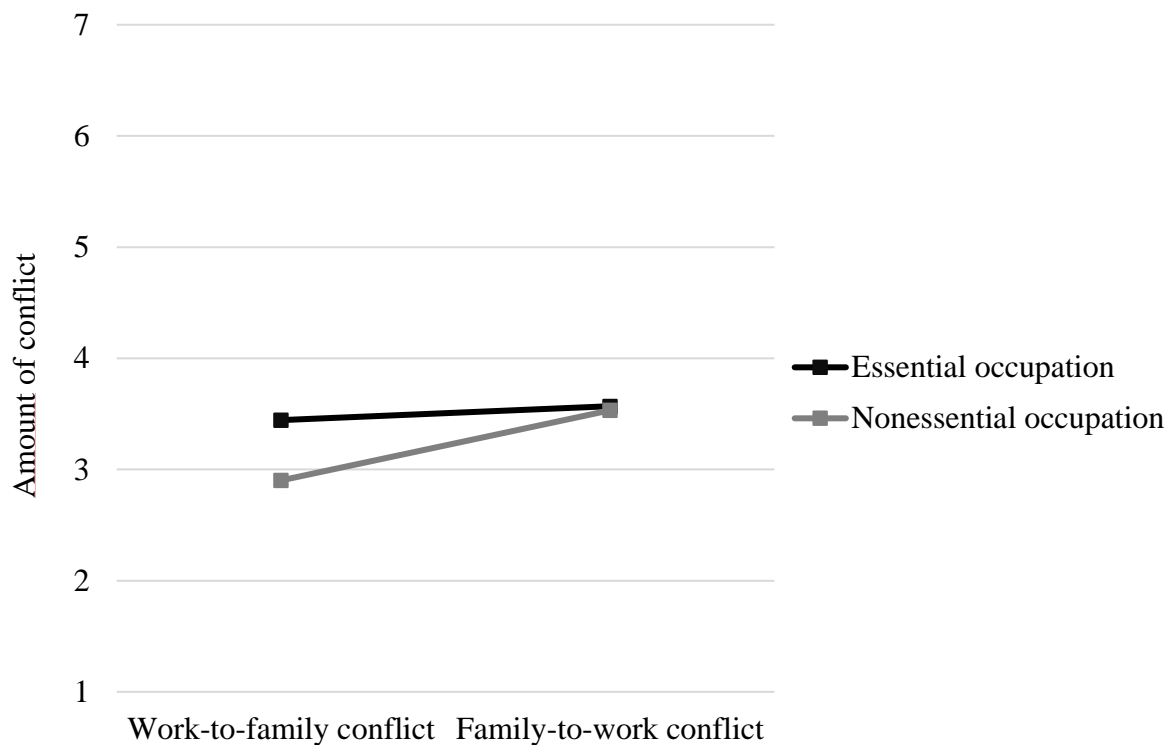


Figure 5. Average scores on work-to-family conflict and family-to-work conflict during the COVID-19 crisis, for participants with and without an essential occupation.

Because the unbalanced sample did not allow for reliable interpretation of interaction effects between gender and parenthood, the effect of gender on the types of conflict was examined for parents only. Contrary to what was found in the sample containing both parents and nonparents, there was a small significant main effect of gender on conflict,  $F(1, 290) = 11.3, p = .001, \eta_p^2 = .038$ , indicating that during the COVID-19 crisis, mothers reported significantly higher levels of both types of conflict ( $M = 3.99, SE = .12$ ) compared to fathers ( $M = 3.33, SE = .15$ ). However, there was no significant interaction between gender and type of conflict for this group,  $F(1, 290) = .018, p = .89, \eta_p^2 < .001$ , indicating that the difference between experienced work-to-family conflict and family-to-work conflict did not differ significantly between fathers and mothers.

#### Hypothesis 4 – Work-family guilt

A two-way repeated-measures analysis of covariance (ANCOVA) was conducted to compare work-to-family guilt and family-to-work guilt during the COVID-19 crisis (*guilt*) between men and women and between parents and nonparents, while controlling for having an essential occupation (covariate). There was no significant main effect of type of guilt,  $F(1, 366) = .72, p = .40, \eta_p^2 = .002$ , indicating that, overall, participants experienced no significant

difference between the two types of guilt (work-to-family guilt and family-to-work guilt) during the COVID-19 crisis.

The first part of the hypothesis was confirmed by a medium significant main effect of parenthood on guilt,  $F(1, 366) = 53.5, p < .001, \eta_p^2 = .13$ , indicating that during the COVID-19 crisis, parents experienced both types of guilt more strongly ( $M = 3.57, SE = .10$ ) compared to nonparents ( $M = 2.33, SE = .16$ ). Additionally, there was a small significant main effect of gender on guilt,  $F(1, 366) = 12.5, p < .001, \eta_p^2 = .033$ , indicating that women reported to experience the two types of guilt more strongly ( $M = 3.25, SE = .10$ ) compared to men ( $M = 2.65, SE = .15$ ) during the COVID-19 crisis.

Furthermore, there was a medium significant interaction effect between parenthood and type of guilt,  $F(1, 366) = 28.5, p < .001, \eta_p^2 = .072$ , indicating that during the COVID-19 crisis, parents experienced comparable levels of work-to-family guilt ( $M = 3.54, SE = .11$ ) and family-to-work guilt ( $M = 3.60, SE = .11$ ); but nonparents experienced less family-to-work guilt ( $M = 1.88, SE = .17$ ) than work-to-family guilt ( $M = 2.78, SE = .17$ ). So, as can be seen in Figure 6, the difference between parents and nonparents was particularly large for family-to-work guilt.

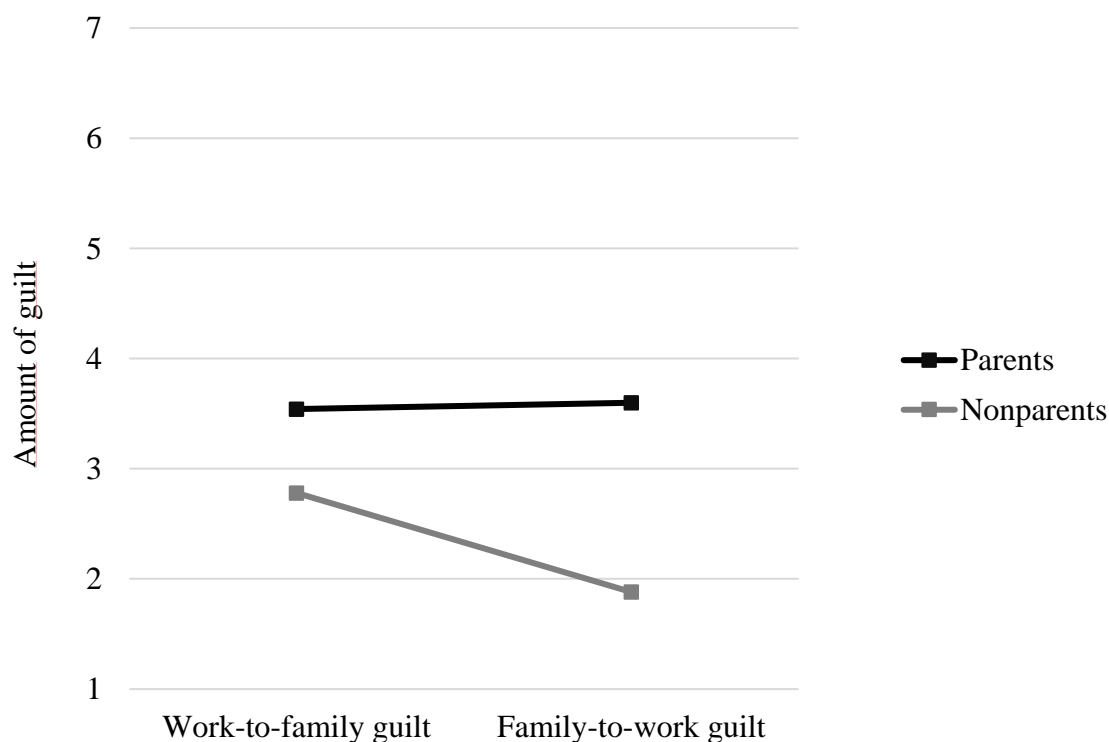


Figure 6. Average scores on work-to-family guilt and family-to-work guilt during the COVID-19 crisis, for parents and nonparents.

There were no significant interaction effects for gender or the covariate essential occupation on type of guilt. Because the unbalanced sample did not allow for reliable interpretation of interaction effects between gender and parenthood, the effect of gender on the types of conflict was examined for parents only. There was a medium significant main effect of gender on guilt,  $F(1, 284) = 23.8, p < .001, \eta_p^2 = .077$ , indicating that mothers reported significantly higher levels of both types of guilt ( $M = 3.92, SE = .11$ ) compared to fathers ( $M = 3.01, SE = .15$ ) during the COVID-19 crisis. However, there was no significant interaction between gender and type of guilt for this group,  $F(1, 284) = .29, p = .59, \eta_p^2 = .001$ , indicating that the difference between experienced work-to-family guilt and family-to-work guilt did not differ significantly between fathers and mothers.

### Discussion

The general aim of this study was to examine how the intelligent lockdown in the first months of the COVID-19 crisis in the Netherlands affected a sample of working adults. The focus of the analyses was mainly on the effects of gender and parenthood, while controlling for whether participants had an essential occupation. Firstly, it was examined whether participants spent more or less time on five household and childcare tasks during the COVID-19 crisis compared to before that. Secondly, work hours before and during the COVID-19 crisis were examined. Thirdly, work-family conflict during the COVID-19 crisis was examined; reported levels of work-to-family conflict and family-to-work conflict were compared. Finally, work-family guilt during the COVID-19 crisis was examined; reported levels of work-to-family guilt and family-to-work guilt were compared. In the following paragraphs, major findings, implications, limitations and suggestions for future research will be discussed.

#### Relative time spent on household and childcare tasks

Partial support was found for the first hypothesis, measuring whether participants spent more or less time on five tasks during the COVID-19 crisis as compared to before that. Congruent with what was expected, participants spent more time on household chores, teaching at home, playing with children and childcare since the COVID-19 crisis started. This could be explained by the fact that most participants had to work from home during the intelligent lockdown, and thus spent more time at home and with their family.

When examining the tasks in relation to gender and comparing these conclusions with those of Yerkes et al. (2020), where they reported that task divisions in households became



more traditional during the COVID-19 crisis, the current study displays a similar pattern for household chores and teaching at home. Women reported a larger increase in time spent on household chores and helping their children with home school since the COVID-19 crisis started in comparison to men. This could be due to the fact that women work less hours than men in general, and thus have more time to take on household chores and help out their children, as Van den Breemer (2019), OECD (2019) and the current research suggest. Also in accordance with the hypothesis, parents reported a significantly larger increase in time spent on household chores since the COVID-19 crisis started – arguably because a household with children requires more work, such as laundry, dishes, and cleaning – and with everyone at home during an intelligent lockdown, these chores may take up more time fast.

Results that were not in line with the expectations, were those for grocery shopping – participants reported spending less time on grocery shopping since the COVID-19 crisis started, and men reported spending roughly the same amount of time whereas women reported spending less time on grocery shopping during the COVID-19 crisis compared to before that. These effects could perhaps be explained by the fact that people were urged to stay home and shop alone, so where couples would normally shop for groceries together, oftentimes just one person would go to the supermarket during the intelligent lockdown (Centraal Bureau Levensmiddelenhandel, 2020). People also limited their shopping in general to avoid contact with others – research found that on average, Dutch people used to go to the grocery store 3 times a week before the COVID-19 crisis, which decreased to 2 times a week during the first intelligent lockdown (Manhattan Associates, 2020). Secondly, there were no significant gender effects for playing with children and childcare, meaning that both men and women reported to spend more time on these tasks since the COVID-19 crisis started. It is important to note that Yerkes et al. (2020) have pointed out that even though men and women both *perceived* to have spent a similar amount of extra time on tasks at home, it is often women who still actually did the most.

### **Work hours before and during the COVID-19 crisis**

Partial support was found for the second hypothesis, examining work hours before and during the COVID-19 crisis. In accordance with what was expected, participants reported a decrease in work hours during the COVID-19 crisis in comparison to before the COVID-19 crisis. Working from home during the intelligent lockdown seemed to affect the number of hours participants managed to spend on their job, as their work-life balances were thrown off by trying to organize and align working from home with their families and other tasks at

home. Also in accordance with the expectations, parents reported a larger decrease in work hours since the COVID-19 crisis started than nonparents. This could be explained by previous research already suggesting the difficulties of having your children at home while also working from home (Crosbie & Moore, 2004; Felstead & Henseke, 2017; Sullivan, 2000).

Other notable results that the analyses for this hypothesis yielded support for the earlier mentioned role prioritization model (Haines & Stroessner, 2019), which finds its roots in social role theory. Eagly and colleagues inferred from social role theory that men are more likely to fill ‘breadwinning roles’ and women are more likely to fill ‘caregiving roles’ (Eagly, 1987; Eagly & Wood, 1999; 2016); these are deep-rooted stereotypes (Haines, Deux, & Lofaro, 2016) which are still enacted in modern society by ways of men working more than women (OECD, 2017). The current study revealed that women worked significantly less hours than men in general (before and during the COVID-19 crisis), and this effect was also found for mothers – they worked significantly less hours than fathers. This suggests that men in the current research seem to give more priority to their role as ‘worker’ than women do. However, the last part of the hypothesis was not confirmed by the results, as the group of participants who were parents displayed no significant difference between men and women in their decrease in work hours. This means that the expectation that mothers would report a larger relative decrease in work hours since the COVID-19 crisis started than fathers was not confirmed. The absence of this effect suggests that while men and women still differ in the amount of time they spend on their jobs in general, they both struggled to similar extent with the COVID-19 related measures and getting their paid jobs done.

### **Work-family conflict during the COVID-19 crisis**

Support was found for the third hypothesis, examining work-to-family conflict and family-to-work conflict during the COVID-19 crisis. Parents reported more work-family conflict overall during the COVID-19 crisis than nonparents. This was in accordance with what was expected; when someone has to work from home and simultaneously share the space with their children, boundaries between work and home are increasingly blurred, which in turn leads to increased work-family conflict (Kossek et al., 2006; Kossek et al., 2012; Matthews et al., 2010). Due to the unequal sample sizes, it was not possible to examine whether the gender effect was stronger for parents compared to nonparents, but the group of parents was examined separately. There was no gender difference in reported levels of work-family conflict during the COVID-19 crisis in the general sample, but there was in the group of parents; mothers reported significantly higher levels of both types of conflict during the

COVID-19 crisis than fathers, which is concurrent with the expectation. Yerkes et al. (2020) found in their research that mothers tended to take on more household tasks and the lion's share of homeschooling during the COVID-19 crisis in comparison to fathers; this trend is also partially observed in the current research (as described above), and could be a contributing factor in their higher reported levels of work-family conflict (Jansen et al., 2003).

Since the COVID-19 crisis is an unprecedented life event, it was hard to say whether findings from previous research regarding work-to-family conflict and family-to-work conflict would still apply during a pandemic. This study produced several interesting outcomes, first of all that participants from the current sample generally experienced to be more conflicted about family interference with work than work interference with family. This is in contradiction to research findings before the COVID-19 crisis showing that work-to-family conflict is more probable to occur than family-to-work conflict (e.g., Mortazavi, Pedhiwala, Shafiro, & Hammer, 2009). An explanation for this could be that most respondents might not have been used to working from home before, and that it was harder for them to focus on work with their family present.

Secondly, the results revealed that women in this sample reported to experience more work-to-family conflict during the COVID-19 crisis than men did. This is in contradiction to previous findings, stating that women were more likely to experience more family-to-work conflict than men (Allen & Finkelstein, 2014; Blanch & Aluja, 2012; Shockley & Singla, 2011). An explanation for this could be that women had to focus more on their children during the COVID-19 crisis than before, because the children were at home and needed attention regarding home-schooling (Yerkes et al., 2020). Role prioritization theory 'prescribes' women to prioritize their family, but working from home during the lockdown could take away the primary focus on their children. Men and women experienced similar levels of conflict about their family interfering with work, and men reported higher levels of family-to-work conflict than work-to-family conflict. The latter is also contradictory to findings from previous research, which states that men typically experience more work-to-family than family-to-work conflict (Blanch & Aluja, 2012; Cinamon & Rich, 2002; Shockley & Singla, 2011). During the COVID-19 crisis, however, it is indeed plausible that men experienced the most conflict in the work domain. Role prioritization theory 'prescribes' men to prioritize their work, and working from home has made that difficult. As the current research and Yerkes et al. (2020) pointed out, men have taken on more household and childcare tasks than they did before the COVID-19 crisis. Combining a relatively large amount of both family-related tasks and work-related tasks, one might see how men

experience more conflict about their family interfering with their work during the COVID-19 crisis.

Another notable result for this hypothesis was that participants with an essential occupation experienced more conflict about their work interfering with their family during the COVID-19 crisis than participants with a nonessential occupation. This might be explained by the fact that, unlike people with a nonessential occupation, people with an essential occupation were mostly still required to go into work while everyone else had to work from home (e.g., healthcare workers, supermarket employees). Most people with an essential occupation had to be more flexible with their work during the COVID-19 crisis (Vermanen, de Beus, Rooze, & van Bree, 2020) and, as the current research has established, ended up working more hours on average than participants with a nonessential occupation during the COVID-19 crisis. Even though people with an essential occupation could still take their children into ‘emergency daycare’ in the Netherlands (Ministerie van Algemene Zaken, 2020), Noordzij (2020a) suggests that parents with an essential occupation were reluctant to do so at first. Being able to take your children to daycare during a pandemic is practical, but not very pleasant – it poses an extra risk, and being away from your children in uncertain times is unfavorable for any parent. These factors could all contribute to the fact that participants with an essential occupation experienced more conflict about their work interfering with their family during the COVID-19 crisis than participants with a nonessential occupation. It is important to note that although participants with an essential occupation experienced discomfort and conflict about their work interfering with their family, it did not cause them to feel significantly more guilty about it, because participants with an essential occupation did not report higher levels of work-family guilt during the COVID-19 crisis than participants without an essential occupation.

### **Work-family guilt during the COVID-19 crisis**

Partial support was found for the fourth hypothesis, examining work-to-family guilt and family-to-work guilt during the COVID-19 crisis. The results demonstrated that parents experienced more work-family guilt overall during the COVID-19 crisis than nonparents. Experiencing feelings of guilt towards work, family, or both because of having to combine these different life roles is a common experience; previous research has pointed out that parents feel guilty often, more so than nonparents (Borelli et al., 2016; Korabik, 2017; Martinez et al., 2011). Moreover, in the current study (as stated above) parents experienced

more work-family conflict than nonparents, and previous research has suggested that work-family conflict predicts feelings of guilt (Judge et al., 2006; Livingston & Judge, 2008).

The second part of the hypothesis expecting that mothers experience more work-to-family guilt than fathers and fathers experience more family-to-work guilt than mothers during the COVID-19 crisis, remains unconfirmed. However, there were other interesting gender effects: both in the group as a whole and in the group of parents, women reported higher levels of work-family guilt overall during the COVID-19 crisis in comparison to men. So, women in the current research always felt more guilty about their work interfering with their family, *and* about their family interfering with their work, than men did. On top of that, when keeping in mind that work-family conflict predicts feelings of guilt, the current study pointed out that mothers reported higher levels of both types of work-family conflict than fathers during the COVID-19 crisis. Korabik (2015) has also stated that men tend to feel less guilty about work and family because they are still allowed to “fit” into their breadwinner role; *“men did not report a feeling of being pulled into different directions”*, and as described before, stereotypes still have great influence to this day: *“both men and women hold the belief that women are more prone to work-family guilt than men”*. This could be a bias influencing experienced levels of work-family guilt.

### **Practical implications**

The COVID-19 crisis is, as its name implies, a crisis, which is at the moment of writing still ongoing and deeply impacting everyday life. The importance of the current research lies in the implications the results have for equality – who is most affected by a global crisis? The results have demonstrated that the most negative consequences are for women and people with children at home, in terms of work-family conflict and guilt during the COVID-19 crisis. From previous research it is known that work-family conflict leads to negative consequences, such as difficulty unwinding from work (Felstead & Henseke, 2017) emotional exhaustion (Zhang, Griffeth, & Fried, 2012) and poorer mental and physical health (Borgmann, Rattay, & Lampert, 2019). These are serious concerns, especially since the pandemic is already a stressor on its own.

On top of that, research before the COVID-19 crisis has pointed out that men and women generally experience similar levels of work-family guilt (Gonçalves et al., 2017; Korabik, 2015; Martinez et al., 2011). The fact that the COVID-19 crisis prompted the balance to shift towards women in the current sample experiencing higher levels of work-family guilt than men is worrisome and an indicator of the fragility of pre-existing gender

equality on the work-family interface. Women (with and without children at home) could experience consequences of this, as high levels of work-family guilt may prompt people to change aspects of their life in order to reduce these negative feelings (Aarntzen, 2020; Ketelaar & Au, 2003). Women could act on this by reducing their work hours, for example (Aarntzen, 2020; Hewlett & Luce, 2005), which may further impact their chances on the job market. Before the pandemic, women were already experiencing negative consequences of their gender in regard to their career (Aarntzen, 2020; Barreto et al., 2009; Ellemers, 2014; OECD, 2017), so if we want to prevent women from taking an even bigger step back in terms of emancipation, it is vital that measures be taken.

The current research has found that mothers experience the most work-family guilt in this sample, and are thus most ‘at risk’ of making choices in favor of their family, but to the disadvantage of their career. Some political parties in the Netherlands are currently campaigning for free day care, which they do to “stimulate labor participation in young parents” (NOS, 2021). This could be a good step for taking away some of the hurdles that prevent mothers to go to work, but it is not a one-faceted solution. Surveys from organizations for parents in the Netherlands have observed that mothers are “yearning for free day care, but also for more help from their partners and more *me time*” (Noordzij, 2020b). Women and mothers can thrive in their careers if they are supported by their partners, employers, and society as a whole, but this requires structural change. Working part-time or taking paternity leave is still not socially acceptable for many Dutch men, mostly because it is looked down upon in their organizational culture (Rutgers, 2019). To ensure equal career chances for both men and women, especially with children involved, it is vital that changes are made in legislation and policies, awareness about gender roles is stimulated in organizations, and media influences are used to break stereotypes (Rutgers, 2019).

### **Limitations and recommendations for future research**

The current study contained several limitations. The first, as mentioned before, was an unbalanced sample, where women and parents outnumbered men and nonparents. This made the group of men without children for some analyses so small that we had to decide not to examine this interaction effect, and in some instances, it was hard to draw conclusions about the group of men in general. Consequently, it could be possible that the results are more reliable for women than for men. Due to the nature of the study, where participants were obtained through a convenience sample and snowballing technique, it was not possible to control for the amounts of participants in each group. Ideally, a study like this would be

repeated while ensuring that every group (men with and without children, women with and without children) have equal numbers of participants, in order to be able to perform more robust analyses.

Secondly, when looking at the data itself – even though several interesting results were found – most of the effect sizes were small ( $\eta_p^2 < .06$ ) and the other effect sizes were medium ( $.06 < \eta_p^2 < .14$ ), with one large effect ( $\eta_p^2 > .14$ ) (Cohen, 1969). Although research suggests that partial eta squared should be interpreted with care (Richardson, 2011), these effect sizes provide a general idea of the results. Most of the found differences, although significant, are relatively small and could therefore be deemed less important (Coe, 2002); however, work-family conflict and work-family guilt are phenomena that are experienced every day, implicating that even small effects have societal relevance when perceived continuously.

Thirdly, participants in the current sample were not representative of the Dutch population; they were mostly highly educated, white, and in hetero relationships. The research sample examined by Yerkes et al. (2020) was representative of the Dutch population, however they only focused on parental couples consisting of a father and a mother. The constructs are called ‘work-family conflict’ and ‘work-family guilt’, however, past research (and this study) have overwhelmingly focused on traditional families only. For future research it might be interesting to see what the impact of the COVID-19 crisis is for couples who do not adhere to the cisgender/heterosexual narrative, for example. If this would be an area of interest for future research, it might be needed to recruit participants more specifically for this purpose.

Finally, the scope of the current study was limited, while it would have been interesting and valuable to examine additional variables on some occasions. A few examples are that only relative time spent on household and childcare tasks was considered. Because of this, it was only acknowledged that women reported spending more time on household chores since the COVID-19 crisis started (for example), but not *how much more* time. It would be valuable to be able to compare actual time in hours before and during the COVID-19 crisis, in order to determine the magnitude of changes. It would also have been interesting to determine what the reasons are that women in this sample work less – are they choosing to, or doing so because it is expected of them? Aarntzen (2020), among others, has made the point that women might be making those ‘choices’ about their career due to normative pressure to adhere to the expectation for them to prioritize their family. Future research might focus on how women’s own values play into the differences that were projected here. Luckily, the current study is part of a much bigger group of studies, each focusing on their own part of the data – some of the suggestions above will be researched by others.

### **Conclusion**

The present study contributes to existing knowledge on the work-family conflict and work-family guilt domain and poses a valuable addition to the first studies carried out during and on the subject of the COVID-19 crisis. Results showed that for this sample, parents showed a larger increase in time spent on household and childcare tasks and a larger decrease in work hours during the COVID-19 crisis than nonparents. Moreover, parents and women reported higher levels of both work-family conflict and work-family guilt during the COVID-19 crisis than nonparents and men, respectively. These results could lead to a step back in equality and career chances, especially for women with children in the Netherlands, which makes it critical to understand the consequences of the COVID-19 crisis on the work-family domain. Measures have already been taken to promote equal opportunities in the labor market, such as extended paternity leave; however, for these measures to take effect and actually contribute to equality, deep-rooted stereotypes about gender roles need to change.



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**Appendix A – Items used for statistical analyses (in Dutch)**Filtervragen

Heeft u op dit moment een relatie?

- Nee
- Ja, ik ben gehuwd en samenwonend
- Ja, ik ben ongehuwd en samenwonend
- Ja, ik ben ongehuwd en niet samenwonend

Hoe lang wonen u en uw partner al samen?

- Minder dan zes maanden
- Meer dan zes maanden

Algemene demografische vragen

Wat is uw leeftijd (in jaren)? \_\_\_\_\_

Wat is uw geslacht?

- Vrouw
- Man
- Anders, namelijk \_\_\_\_\_

Mijn etnische achtergrond is: (meerdere antwoorden mogelijk)

- Nederlands
- Surinaams
- Antilliaans/Arubaans
- Turks
- Marokkaans
- Somalisch
- Anders, niet Westers, namelijk \_\_\_\_\_
- Anders, Westers, namelijk \_\_\_\_\_

Heeft (hebben) u en/of uw partner kinderen?

- Ja
- Nee

Hoeveel van uw en/of uw partners kinderen wonen in uw huis (parttime of fulltime)?

- Keuze uit 1, 2, 3, [...] t/m 10 of meer

Hoe oud zijn de kinderen die thuis wonen?

- Invullijn voor de leeftijd van elk kind die opgegeven is thuis te wonen in voorgaande vraag

Vragen over uw leven voor de coronacrisis

Voorafgaand aan de coronacrisis, hoeveel uur per week werkte u ongeveer? \_\_\_\_\_

Vragen over uw leven sinds de coronacrisis en intelligente lockdown begon

Ongeveer hoeveel uur per week lukt het u werkelijk om te werken sinds de coronacrisis begon? \_\_\_\_\_

Besteedt u sinds de coronacrisis begon, meer, minder of evenveel tijd aan de volgende taken?

- Huishoudelijke taken (wassen, koken, schoonmaken)
- Huishoudelijke boodschappen (supermarkt, drogist)
- Thuis lesgeven en/of helpen met huiswerk
- Met kinderen spelen/ze vermaken
- Voor kinderen zorgen (voeden, wassen, naar bed brengen)

Voor elke taak antwoordopties:

- 1 – Ik besteed hier nu veel minder tijd aan
- 2
- 3
- 4 – Ik besteed hier nu evenveel tijd aan
- 5
- 6
- 7 – Ik besteed hier nu veel meer tijd aan

Geeft u alstublieft aan in hoeverre de onderstaande stellingen op u van toepassing waren in de afgelopen tijd, sinds de coronacrisis begon.

- Vanwege zorgtaken thuis werden mijn werkgerelateerde activiteiten verstoord.
- Werktaken die ik wilde doen, kreeg ik niet gedaan omdat ik voorrang moest/wilde geven aan mijn zorgtaken thuis.
- Door de stress die ik heb ervaren vanwege het zorgen voor mijn familie, heb ik minder goed werkgerelateerde taken kunnen uitvoeren.
- Mijn verantwoordelijkheden op het werk hebben mijn leven thuis negatief beïnvloed.
- De tijd die ik moest besteden aan mijn werk, heeft het moeilijk gemaakt om mijn verantwoordelijkheden thuis te vervullen.
- Stress die het werk met zich meebracht heeft het moeilijk gemaakt om mijn verantwoordelijkheden thuis te vervullen.

Voor elke stelling antwoordopties:

- 1 – Helemaal niet mee eens
- 2
- 3
- 4
- 5
- 6
- 7 – Helemaal mee eens

Denk aan uw situatie als werkende sinds de coronacrisis begon. Geef aan in hoeverre u het eens bent met de volgende stellingen.

- Ik vind het vervelend dat ik niet zoveel aandacht aan mijn familie kan geven als dat ik ideaal zou vinden in deze situatie.
- Ik voel mij schuldig dat ik door mijn werk niet in staat ben om zo goed voor mijn familie te zorgen als ik zou willen in deze situatie.
- Ik voel mij slecht omdat ik steeds met werk bezig moet zijn.
- Ik vind het vervelend dat ik werkafspraken en taken nu niet kan nakomen door mijn verantwoordelijkheden voor mijn familie.
- Ik voel mij schuldig omdat ik door mijn bezigheden thuis niet genoeg aandacht heb om mijn werk van goede kwaliteit te laten zijn.
- Ik voel mij slecht omdat ik steeds tijd van werk moet nemen om te kunnen omgaan met dingen die thuis moeten gebeuren.

Voor elke stelling antwoordopties:

- 1 – Helemaal niet mee eens
- 2
- 3
- 4
- 5
- 6
- 7 – Helemaal mee eens

#### Vragen over het werk dat u doet tijdens de coronacrisis

Hieronder vindt u een lijst met beroepen die door de Nederlandse overheid zijn geclassificeerd als ‘cruciale beroepen’. Heeft u op dit moment een cruciaal beroep volgens deze lijst? Kies het antwoord dat het beste bij uw werksituatie past.

- Nee, ik val niet in de categorie cruciale beroepen
- Zorg, Jeugdhulp en (Maatschappelijke) Ondersteuning, inclusief productie en transport van medicijnen en medische hulpmiddelen
- Leraren en personeel benodigd op school, zoals voor afstandsonderwijs, opvang van kinderen en examens
- Openbaar vervoer
- Voedselketen (supermarkten, de aanlevering van supermarkten, de verwerkende industrie, de transporten van deze industrie, het ophalen van producten bij boeren, het aanleveren van bijvoorbeeld veevoer en andere producten bij boeren, de toegang van arbeiders voor de oogst)
- Transport van brandstoffen zoals kolen, olie, benzine en diesel, et cetera
- Vervoer van afval en vuilnis
- Kinderopvang
- Media en communicatie (ten behoeve van informatievoorziening aan de samenleving die van noodzaak is om op de hoogte te blijven van wat er speelt.
- Continuïteit hulpverleningsdiensten (meldkamerprocessen, brandweezorg, ambulancezorg, GHOR, crisisbeheersing van de veiligheidsregio's)

- Noodzakelijke overheidsprocessen (Rijk, provincies, gemeenten en waterschappen), bijvoorbeeld betalen uitkeringen en toeslagen, burgerzaken, consulaten en ambassades justitiële inrichtingen en forensische klinieken
- Mijn cruciale beroepsgroep staat er niet bij, namelijk \_\_\_\_\_
- Ik weet het niet

**Appendix B – Factor analyses results for work-family conflict and work-family guilt**

Table 3

*Summary of factor analysis results for the work-family conflict scale (N = 387)*

Item	Rotated Factor Loadings	
	WTF-conflict	FTW-conflict
Because of care tasks at home, my work-related activities were disturbed.	.26	<b>.87</b>
I could not get work tasks done that I wanted to do, because I had to give priority to care tasks at home.	.23	<b>.95</b>
Because of stress caused by caring for my family, I have not been able to do my work tasks as well as I would like.	.37	<b>.71</b>
My responsibilities at work have negatively impacted my life at home.	<b>.81</b>	.29
The time I had to spend on work has made it more difficult to fulfill my responsibilities at home.	<b>.86</b>	.27
Work-induced stress has made it more difficult to fulfill my responsibilities at home.	<b>.88</b>	.26
<i>Eigenvalues</i>	3.98	1.17
<i>% of variance</i>	66.38	19.57
<i>α</i>	.92	.92

*Note.* Factor loadings over .40 appear in bold.

Table 4

*Summary of factor analysis results for the work-family guilt scale (N = 371)*

Item	Rotated Factor Loadings	
	FTW-guilt	WTF-guilt
I feel bad about not giving as much attention to my family as I would like in this situation.	.19	<b>.72</b>
I feel guilty about not being able to care as well for my family as I would like in this situation.	.33	<b>.91</b>
I feel bad because I constantly have to be busy with work.	.38	<b>.70</b>

I feel bad about not being able to meet work appointments and tasks because of my responsibilities towards my family.	<b>.78</b>	.35
I feel guilty because my activities at home cause me to have insufficient attention for assuring my work is of good quality.	<b>.91</b>	.32
I feel guilty because I constantly have to take time off work to tend to matters happening at home.	<b>.83</b>	.25
<i>Eigenvalues</i>	3.98	1.03
<i>% of variance</i>	66.30	17.15
<i><math>\alpha</math></i>	.92	.87

*Note.* Factor loadings over .40 appear in bold.