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**Working Paper**

## Coronavirus & care: How the coronavirus crisis affected fathers' involvement in Germany

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# Coronavirus & Care: How the Coronavirus Crisis Affected Fathers' Involvement in Germany

Michaela Kreyenfeld and Sabine Zinn

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## **Coronavirus & Care:**

### **How the Coronavirus Crisis Affected Fathers' Involvement in Germany**

Michaela Kreyenfeld and Sabine Zinn

#### **Background**

As a response to the spread of the coronavirus in Germany, day care centres and schools closed nationwide, leaving families to grapple with additional child care tasks. In Germany, as in many other societies, women shoulder the lion's share of housework and child care responsibilities. While the gendered division of household labour has shifted in recent years as men have become more engaged in the upbringing of their children, it was hypothesised that the coronavirus crisis may have resulted in a re-traditionalisation of behaviour. This paper examines this hypothesis by analysing how the time fathers spent with their children changed over the course of the coronavirus crisis in the case of Germany.

#### **Methods**

Data for this investigation come from the German Socio-Economic Panel (GSOEP). The outcome variable is the time spent on child care tasks. We investigate how the time parents spent with their children changed between 2019 and spring 2020, and how these patterns differed by gender, education, and employment situation. As a method, we employ linear panel regressions where the dependent variable is the change in childcare time between the two survey years.

#### **Results**

We find that fathers and mothers expanded the time they spent on child care to similar degrees between 2019 and spring 2020, which marks the climax of the coronavirus crisis. However, we also observe large differences by level of education. In particular, we find that men with low and medium levels of education spent more time with their children than they did before the onset of the crisis. This finding is at odds with the results of prior studies on fathers' involvement, which showed that highly educated men tend to be the vanguards of paternal involvement.

#### **Contribution**

Our study provides novel evidence on the effect of the coronavirus crisis on fathers' involvement in child care. Contrary to expectations based on previous research, we find that fathers significantly expanded the time they were spending with their children over the course of the crisis. While we also find that women continue to perform the bulk of child care tasks, our results cast a positive light on the potential of paternal involvement in contemporary societies.

## **1 Background**

A large body of literature has investigated the division of household labour, including how it has evolved over time, and how it changes across the life course (Altintas & Sullivan, 2017; Bianchi, 2000; Dechant & Schulz, 2014; Grunow & Evertsson, 2016; 2019; Lyonette & Crompton, 2015; van der Lippe, Treas, & Norbutas, 2018). A consistent finding in this literature is that the birth of the first child is a turning point in the gendered division of household labour. In many cases, the arrival of a child leads to a reconfiguration of behaviour along traditional gender roles, even in couples in which the partners had previously shared household chores equally and had earned equally high wages (Dechant & Schulz, 2014; Daniela Grunow & Evertsson, 2016). While the bulk of child care and household chores continue to rest squarely on the shoulders of women, we have also observed in recent decades a trend towards men becoming increasingly engaged in the upbringing of their children (Altintas & Sullivan, 2017; Hook & Wolfe, 2012). Moreover, a slight increase in men's engagement in routine housework (cooking, cleaning, etc.) has been documented (Bianchi, Sayer, Milkie, & Robinson, 2012).

However, the patterns of the gendered division of household labour differ radically across countries and social policy contexts. Germany is usually characterised as a traditional system in which the tax and transfer system incentivises a gendered division of work. Recent policy reforms – such as the expansion of child care for children below age three – have resulted in some increases in maternal full-time work (Wrohlich, Geyer, & Haan, 2015; Zimmert, 2019). Furthermore, the introduction of “daddy months” in the parental leave system in 2007 has led to an increase in the share of fathers taking parental leave. Yet despite these recent changes, the patterns remain strongly gendered. Only a small fraction of men with children are working part-time, while part-time employment is very common among women with children, particularly in the western parts of the country (OECD, 2017; Schneider, Sulak, & Panova, 2019). Likewise,

the division of housework is strongly gendered. According to the most recent time use survey from 2012/13, there were large gender differences in the division of housework in couple households with children. Klünder and Meier-Gräwe (2017) found that on an average weekday men spent roughly three hours on child care and household tasks, while women spent almost 5½ hours. These results have been corroborated by a large body of further research, mostly based on data from the German Socio-Economic Panel (e.g., Zabel & Heintz-Martin, 2013; Leopold et al. 2018).

The coronavirus epidemic, which swept across Germany in the early months of 2020, has had severe social and economic repercussions. The efforts of public health officials to prevent the spread of the virus led to a nationwide closure of schools and day care centres. Authorities also urged parents to reduce contact between their children and the children's grandparents, which left many parents of young children with additional child care burdens. In light of these developments, it was hypothesised that the coronavirus crisis has led to a re-traditionalisation of gender role behaviour, with women bearing the brunt of the additional child care chores that have arisen (Koch, 2020). However, the evidence supporting this claim has been rather inconclusive. A cross-sectional survey conducted by the Institute of Economics and Social Research asked parents to compare how they organised child care before and during the coronavirus crisis (Kohlrausch & Zucco, 2020). While the study confirmed that women have been shouldering the lion's share of the childrearing tasks during the crisis, it also found that the division of care in families has become somewhat more equal. A similar finding was reported based on a study for the UK (Sevilla & Smith, 2020). A survey conducted by Bünning, Hipp, and Munnes (2020) focused on employment patterns and how they have changed over the course of the coronavirus crisis in Germany. The results indicated that mothers have reduced their employment activities more than fathers, which suggests that women may have also become more engaged in child care activities.

The present study complements these more descriptive findings with an analysis of longitudinal data for Germany. We compare care patterns before and during the crisis, investigating how they varied by gender, and how they were affected by past and present employment patterns.

## **2 Data & method**

### **2.1 Data**

Data for this investigation come from SOEP-CoV. SOEP-CoV is a sub-sample of the German Socio-Economic Panel (GSOEP) that was surveyed between 30 March and 28 June 2020. To this end, all GSOEP households with a valid telephone number (excluding the so-called “refugees samples”) were contacted by telephone and one adult person in the household was asked to participate in the survey. Half of the calls were made in the late afternoon or evening (51% in total) to ensure that the working population (or rather that was not working in home-office) could also be reached. The sample of SOEP-CoV were randomly divided into nine tranches of participants who were contacted at two to three weekly intervals (for details, see Kühne et al. 2020). In this article, we use data from the first four tranches of SOEP-CoV, which were collected between 30 March and 30 May 2020. This period corresponds fairly well to the time of the lockdown and the period when the federal states had ordered the closure of schools and day care centres. To enable us to track respondents’ care patterns over time, we linked the SOEP-CoV 2020 data to GSOEP data from 2019.

The analytical sample includes respondents who were sharing a household unit with children aged 0-11 at the time of the first interview in 2019. We have generated a balanced panel; i.e., we have kept individuals who participated in GSOEP 2019 and SOEP-CoV 2020. We excluded respondents who were still childless in 2019, regardless of whether they had children thereafter. We also eliminated respondents who dropped out of the panel study or who had stopped living with their children (for example, as a result of union dissolution). In addition, we dropped single

parents from the sample. The sample was further restricted to women and men who were aged 20-59 at the time of the first interview. Finally, we omitted respondents with missing information on the outcome variable and on the independent variables. We did not conduct any imputation here, as the proportion of missing values was negligible (less than 5% of the overall sample size).

The outcome variable is a continuous variable for the *hours spent on child care tasks* per weekday by the father or the mother. Note also that in most cases, the respondents are the biological parents of the children in the household. However, we did not distinguish step-, foster, or adoptive parents from biological parents.

The independent variables are the *gender of the respondent*, *region* (eastern or western Germany), the *age of the youngest child* (ages 0-2, 3-5, 6-11), and the total *number of children* in the household (one, two, and three or more). *Employment status* is differentiated by full-time employment, part-time employment (including marginal employment), non-employment, and other. *Educational level* is categorised as low, medium, or high based on the CASMIN classification scheme. *Migration status* distinguishes respondents who have a direct migration background from those who are native-born.

Table 1 reports the weighted sample statistics for the characteristics measured in 2019. For employment status, which is our only time-varying covariate, we also report the values for 2020. In total, the analytical sample includes 925 respondents. The distribution of the independent variables by gender provides the expected pattern. The table indicates that, on average, the women have slightly lower levels of education than the men. This pattern can be attributed to the sample composition, which is restricted to respondents with children. In general, German women and men have reached parity in terms of formal education. However, in Germany, having more education is associated with higher levels of childlessness among women, but lower levels of childlessness among men (Kreyenfeld & Konietzka, 2016). Thus,



we tend to find some gender differences in parents' levels of education. Likewise, the share of respondents in our sample who have a migration background is relatively high, at 31%. This disproportionate share can be attributed to the migrant population's low levels of childlessness and age structure. Most of the couples in the sample have two children, which corresponds to the "two-child norm"; a pattern that has been reported in many western European countries, including in Germany (Testa, 2007). Noteworthy are the large gender differences in the work patterns of the respondents. The overwhelming majority of the fathers indicated that they were employed full-time in both 2019 and 2020, while most of the mothers reported that they were working part-time. When we look at how these work patterns changed between 2019 and 2020, we see that the share of employed individuals increased, particularly among the mothers. This pattern must be attributed in part to the design of our analytical sample, which is a balanced panel. As the children in our sample became older between the two survey dates, parents who had previously reduced their working hours were able to increase their labour market activities. It should also be emphasised that the shares of both the female and the male respondents whose employment status was in the "other" category increased somewhat from 2019 to 2020, as this category includes respondents who shifted to "short-time work" during the coronavirus crisis.

Table 1: Sample composition, column %.

	Women in partnership	Men in partnership	All
Gender			
Male	--	--	0.50
Female	--	--	0.50
Region			
Western Germany	0.82	0.78	0.80
Eastern Germany	0.18	0.22	0.20
Migration background			
No migration background	0.70	0.69	0.69
Migration background	0.30	0.31	0.31
Age of youngest child in household			
Age 0-2	0.29	0.32	0.30
Age 3-5	0.26	0.30	0.28
Age 6-11	0.45	0.38	0.41
Number of children in household			
One child	0.41	0.40	0.41
Two children	0.43	0.38	0.40
Three or more children	0.16	0.22	0.19
Level of education			
Low (CASMIN 0,1a,1b,2b)	0.15	0.12	0.14
Medium (CASMIN 1c,2a,2c)	0.51	0.46	0.48
High (CASMIN 3a,3b)	0.34	0.42	0.38
Employment status (2019)			
Full-time	0.18	0.83	0.50
Part-time	0.41	0.06	0.23
Not employed	0.32	0.09	0.21
Other	0.09	0.02	0.06
Employment status (2020)			
Full-time	0.27	0.78	0.53
Part-time	0.47	0.05	0.26
Not employed	0.18	0.04	0.11
Other	0.08	0.12	0.10
Sample size (unweighted)	603	322	925

*Note:* Weighted statistics.

## 2.2 Method

We employ a simple descriptive measure; i.e., we calculate the mean of the time (in hours) that the respondents spent on child care activities per weekday in 2019 and 2020. We calculate group means, but also means for the individual changes across time. All descriptive analyses are conducted separately for men in partnerships and women in partnerships. The regression analysis consists of two steps. In a first step, we have estimated a linear regression model in which the outcome variable is the individual change in time spent on child care between 2019

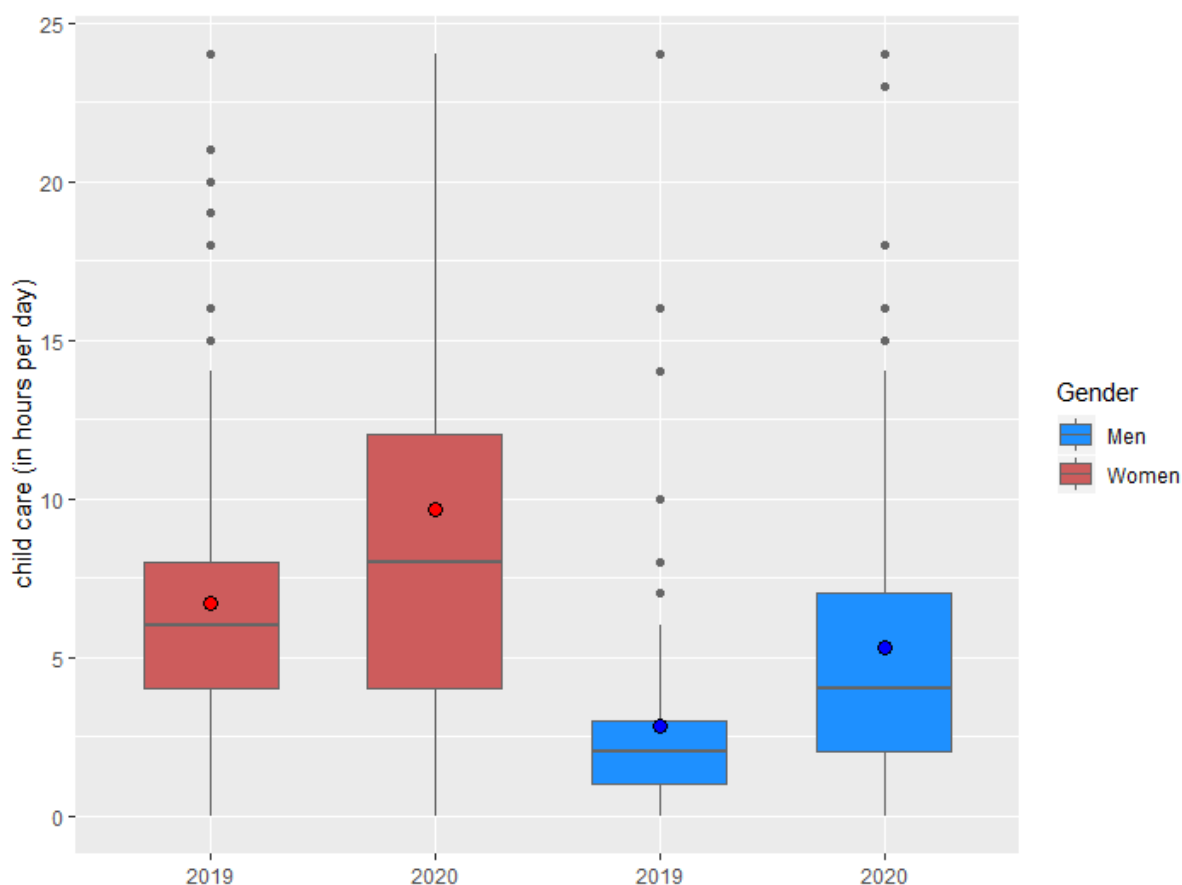
and 2020. The independent variables are the characteristics measured in 2019. In a second step, we have estimated a fixed-effects model in which we study how changes in the respondents' employment status have affected the time they spent with their children. All analyses are weighted using non-response-adjusted and post-stratified survey weights for the respondents who participated in the first four tranches of the SOEP CoV study. In the related non-response analysis, particular attention was paid to employment status, income, gender, number of persons in a household, household type, educational level, migration background, and whether a person works in a systemically important occupation, as well as the Covid-19 incidence at NUTS-3 regional level (on the day of the interview). Post-stratification was based on distributions taken from the German Microcensus 2018 for various regional and socio-economic characteristics, including age, gender, household size, citizenship, size of municipality, and federal state. The derivation of the respective survey weights is described in Kühne et al. (2020). To verify whether the analytic sample of this study (i.e., the balanced panel of respondents in 2019 and 2020) represents a random sub-sample of the 2020 SOEP-CoV sample for which the survey weights were derived, we conducted a selectivity analysis. We estimated a logistic regression model in which the indicator for participation (or non-participation) in the two survey years 2019 and 2020 was the dependent variable, and all of the household and individual characteristics described above, including child care hours, were the covariates. We found that in both samples, none of the covariates considered had a significant impact on membership. Therefore, the survey weights derived for the SOEP-CoV sample also fit the panel sample used in this study.

### **3 Results**

#### **3.1 Descriptive results**

Figure 1 displays boxplots with the average hours the fathers and the mothers spent on child care per weekday. In line with prior findings for Germany, we find that the mothers spent more time on childrearing tasks than the fathers. In 2019, the men in partnerships reported spending 2.8 hours per day on child care, whereas their female counterparts reported spending 6.7 hours per day. These values had risen sharply by spring 2020, at the climax of the crisis: at that time, the fathers indicated that they were spending 5.3 hours per day on child care activities, while the mothers reported spending 9.6 hours. In absolute terms, the increase was slightly larger for the women than for the men. However, in relative terms, the effect was more pronounced for the fathers than for the mothers. The amount of time spent with children increased 89% among the fathers compared to 43% among the mothers. The findings also reveal that there was substantial variation in the number of hours the respondents reported spending with children, including several outliers who stated that they spent 20 or more hours per day taking care of their children (N=28 in 2019 and N=94 in 2020, with 85% of the outliers being women).

Figure 1: Boxplots of child care time (in hours per weekday) by gender and year, 2019 and 2020



*Notes:* All values are weighted. The red and blue dots mark the weighted mean care times for the years 2019 and 2020. The horizontal lines show the median values, and the coloured boxes show the inter-quartile ranges (i.e., the differences between the 75<sup>th</sup> and the 25<sup>th</sup> percentiles).

Table 2 breaks down the child care time by socio-demographic characteristics. Furthermore, it displays the mean of the change in the time spent on child care between 2019 and 2020. We observe substantial increases across all groups. An exception is the group of fathers who had already been very engaged in childcare, or who were either part-time employed or unemployed in 2019. However, this group was very small, and was partially composed of fathers who were on parental leave with their new-born children in 2019. The largest increases can be observed

for the parents of children aged 3-5. The parents of school-aged children also increased their involvement, but to a lesser extent. On the one hand, the parents of school-aged children may have been burdened with home-schooling during the lockdown. On the other hand, school-aged children are better able than younger children to take care of themselves, at least for parts of the day. Thus, the table suggests that the parents of pre-school children were the most affected by the coronavirus crisis, or at least changed their care patterns the most in response to it.

Surprisingly, the results indicate that the highly educated parents – particularly the fathers – were the least likely to report spending more time with their children over the course of the crisis. Highly educated fathers have often been viewed as vanguards of involved fatherhood (Geisler & Kreyenfeld, 2018). It has, for example, been shown that highly educated fathers in Germany expanded their involvement more than their less educated counterparts in reaction to the introduction of the earnings-related parental leave scheme in 2007 (ibid.). However, the present analysis reveals that the coronavirus crisis pushed fathers with low or medium levels of education towards a greater involvement with their children.

The table also displays differences by employment status as measured in 2019. Because the overwhelming majority of the fathers were full-time employed at that time, the sample sizes for the other categories were too small to generate robust results. However, a comparison of the full-time employed women and men yields important insights. It shows that care patterns in 2019 were very unequal, even, if one “fixed” the employment status. Full-time employed mothers spent roughly 2 hours more per day on childcare than full-time employed fathers. Between 2019 and 2020, mothers and fathers expanded child care about equally. Given the different “a priori conditions”, however, the care burden increased to almost 8 hours per day that mothers had to shoulder besides their full-time job.

The table also shows that the increase in child care time between 2019 and 2020 strongly depends on the involvement in child in 2019. Those respondents who were already heavily

involved in child care expanded less. An important reason why the men could expand their care activities from 2019 to 2020 is that prior to the coronavirus crisis, most were only moderately engaged in child care tasks. As most of the women were already heavily involved in the upbringing of their children before the crisis, they had less room to expand their engagement levels even further.

Another methodological issue must also be considered. We tried to link the change in behaviour between 2019 and 2020 to the coronavirus crisis. However, the changes in the time spent on child care between 2019 and 2020 cannot be attributed to the crisis alone, as the respondents' circumstances likely changed in other ways as well during this time frame. Technically, this means that time-varying heterogeneity may have affected our results. A possible confounder could be gender role attitudes which have become more supportive to men's involvement in child care tasks. Albeit that our observation window is narrow (in most cases shorter than one year), we cannot rule out that attitudinal changes could affect the results. It also needs to be emphasized that the children in our sample grew older over the study period. Thus, the opportunities of the parents to expand their employment increased over this time period as well. This may have downward-biased the results, as one would generally expect that parental engagement declines as children grow older.

Table 2: Mean child care time (in hours) and mean difference in child care time 2020-2019

	Child care time 2019		Change from 2020-2019	
	Men in partnership	Women in partnership	Men in partnership	Women in partnership
Age of youngest child in household				
Age 0-2	4.43	10.16	1.36	1.88
Age 3-5	2.24	6.42	3.53	4.09
Age 6-11	1.93	4.67	2.53	2.94
Employment status 2019				
Full-time	2.48	4.76	2.85	3.04
Part-time	(3.38)	5.20	(3.61)	3.34
Not employed	(5.96)	9.81	(-2.81)	2.70
Other	(1.17)	6.53	(6.52)	1.64
Level of education 2019				
Low (CASMIN 0,1a,1b,2b)	(2.43)	6.91	(4.00)	2.86
Medium (CASMIN 1c,2a,2c)	2.25	7.21	3.75	3.13
High (CASMIN 3a,3b)	3.57	5.87	0.59	2.68
Child care time in 2019				
0-2 hours	1.26	1.38	3.06	3.79
3-5 hours	3.69	4.23	3.10	3.98
6 and more hours	(13.17)	9.85	(-4.92)	1.98
All	2.82	6.70	2.46	2.93

Note: Weighted estimates. Sample sizes below N=30 are marked by parentheses.

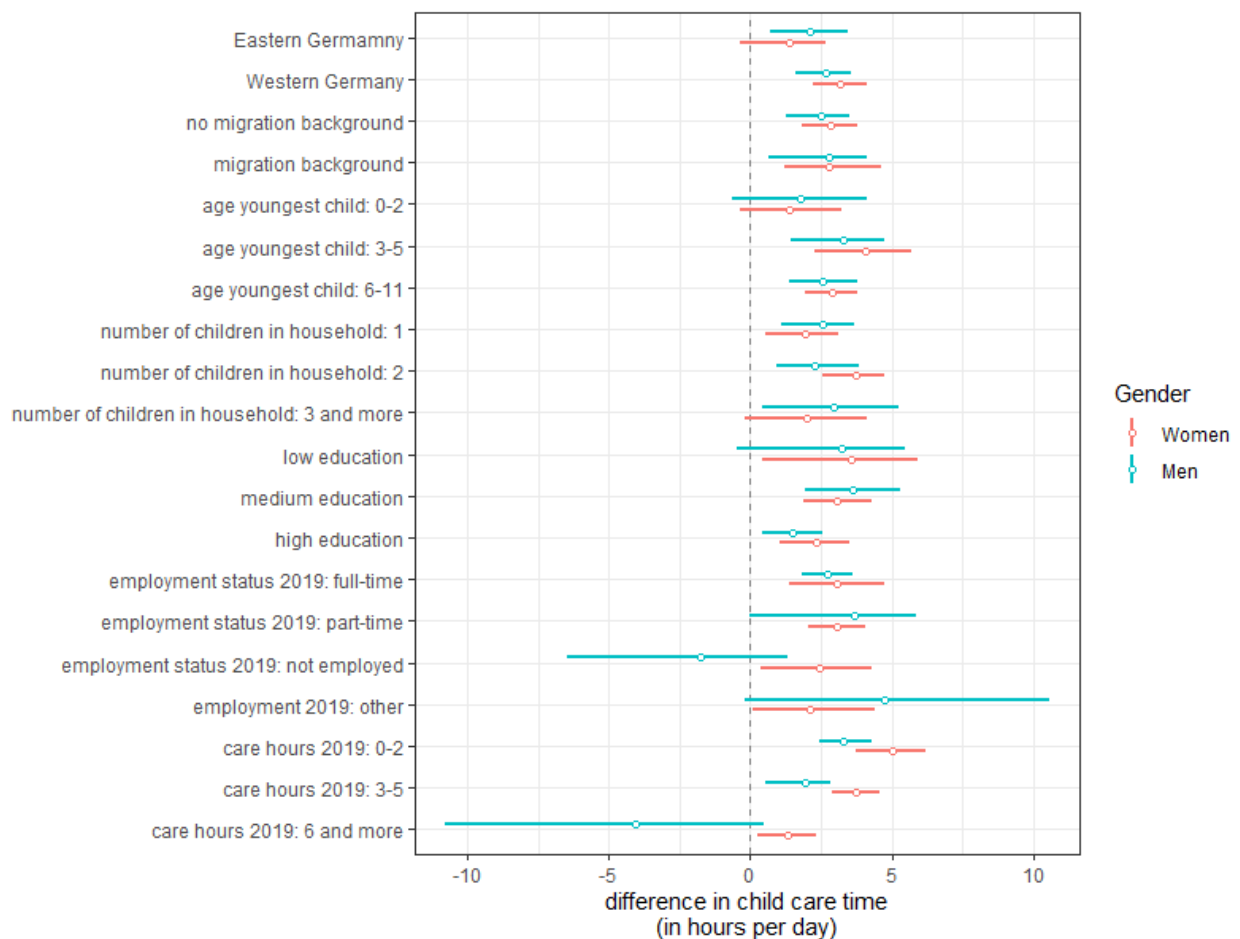
### 3.2 Regression Results

Figure 2 plots the margins (predicted values) from the regression analysis (see Table A1 in the Appendix for the full model results). The model includes all of the abovementioned covariates as well as standard confounders (region, migration background, number of children). It shows that the western Germans increased the time they spent with their children more than the eastern Germans, while there were no differences by migration background. The rest of the model corroborates the previous descriptive analysis. In particular, it again shows the differences by level of education. Unlike the less educated fathers, the highly educated fathers barely changed the time they spent with their children in response to the crisis. Surprisingly, employment status did not seem to affect the time spent with children, except among the non-working and part-time employed fathers – for whom, however, the sample sizes were too small to warrant a meaningful interpretation. In order to exclude problems of endogeneity due to a possible dependence of the dependent variable in our models (i.e. change in childcare time between 2019



and 2020) and childcare time in 2019 (one of the explanatory variables) on an unobserved confounder, we conducted a statistical ex-post test. Specifically, we regressed the residuals of the two linear models estimated for men and women on the childcare hours in 2019. The corresponding two regressions did not show any significant dependence between the residuals and the childcare times in 2019. There is therefore no indication of an endogeneity problem in the present case.

Figure 2: Predicted differences in child care time (in hours per weekday) between 2019 and 2020.



*Note:* Horizontal lines mark 95% confidence intervals (derived using basic bootstrap).

The employment status is measured in 2019 in the regression model above. However, this model does not reflect changes in employment over the course of the crisis. In order to account for changes in employment and to unravel the effect of employment on the time spent on child care, we have also estimated a fixed-effects model in which employment is integrated as a time-varying covariate together with a dummy for the time period. Table 2 reports the margins (predicted values) from the analysis. In contrast to the previous investigation, the fixed-effects model shows that non-employment led to an increase in the time spent on child care for both the men and the women. The table indicates that the non-employed women spent about 12 hours per day caring for their children, whereas the non-employed men spent seven hours. We also see a similar gendered pattern among the full-time employed respondents, with the men spending 3.6 hours per day on child care, and the women spending 6.3 hours. Thus, even keeping the employment status constant, we see that the women were spending almost twice as much time with their children as the men. Nevertheless, the sample size of the non-employed men was still small, leading to large confidence bounds. Note also that a fraction of the non-employed parents, and of the men in particular, were on parental leave. An analysis in which we excluded the parents with children below age one led to smaller values for the non-employed (see Table 2, right column). The model results also show that the parents in “other” types of employment spent more time with their children. This category was heterogeneous, but it included a large fraction of parents in short-time work, particularly in 2020. In sum, 60% of the men and 55% of the women in the “other” category were in short-time work. Thus, it appears that the shift to other types of employment, such as short-time work, triggered an increase in parental involvement.

Table 2: Results from fixed-effects regression, predicted care time in hours per day.

	All		Sensitivity analysis (Excluded: persons who had children below age one)	
	Men in partnerships	Women in partnerships	Men in partnerships	Women in partnerships
Year				
2019	2.77 (2.07,3.43)	6.26 (5.77,6.65)	2.56 (1.84,3.04)	5.45 (4.99,5.85)
2020	5.28 (4.25,6.32)	9.60 (8.68,10.41)	5.26 (4.12,6.19)	8.97 (8.04,9.83)
Employment status				
Full-time	3.63 (2.97,4.31)	6.28 (5.15,7.19)	3.74 (3.01,4.36)	5.76 (4.61,6.87)
Part-time	5.28 (3.52,6.53)	6.28 (5.15,7.19)	5.58 (3.68,7.18)	6.89 (6.40,7.52)
Not employed	6.76 (1.27,10.60)	11.71 (10.61,12.69)	4.28 (-0.36,6.67)	9.49 (8.03,10.91)
Other	5.52 (1.16,8.59)	8.70 (6.87,10.42)	3.57 (0.94,5.25)	8.66 (5.83,10.44)
Sample size (unweighted)	322	603	283	536
Model fit (adj. r square)	0.10	0.20	0.10	0.14

Notes: Outcome variable: Daily child care time. Weighted analysis. Values in parentheses denote the 95% confidence intervals for the predicted difference values derived using basic bootstrap.

#### 4 Concluding remarks

This paper has examined how parents changed their levels of parental involvement between 2019 and spring 2020, when the coronavirus crisis hit Germany and schools and day care facilities were closed nationwide. It was suspected at the time that the coronavirus crisis would cause the already unequal division of child care tasks to shift in the direction of an even stronger traditionalisation of behaviour. Our analysis, which was based on representative and longitudinal data from the German Socio-Economic Panel (GSOEP), instead showed that both the fathers and the mothers in our sample reported spending substantially more time with their children during the crisis than they did in the previous year. Although the absolute increase was a bit larger for the mothers, we still found that the fathers spent, on average, 2.5 more hours per day with their children. Overall, this result paints a rather positive picture of the potential for fathers' involvement. It also leads us to reject the “re-traditionalisation hypothesis”, which has

argued that the additional household work generated by the coronavirus crisis would squarely fall on the shoulders of women. On the one hand, Germany had indeed in the past been regularly typified as conservative society which upholds traditional attitudes towards maternal employment and care. Against this background, a “re-traditionalisation” could have largely been expected. On the other hand, family policies have been reformed radically in recent years, including a major parental leave benefit reform in 2007 which incentivised paternal engagement through “daddy months” as well as a large-scale expansion of child care since 2005. The respondents in our sample have all profited from these reforms, as the children in our sample were younger than age 12 in 2019. Our results suggest that a futile ground and an atmosphere has been created by these reforms which provided the potential for a stronger engagement of fathers in the upbringing of their children.

However, there are many factors that need to be accounted for in this comparison across time. For example, parents usually engage less with children as they get older. As we compared the behaviour of the same individuals across two years, this has important implications. We had assumed that the differences in behaviour between 2019 and 2020 could be attributed to the impact of the coronavirus crisis. However, as the children grew older between the survey years, *ceteris paribus*, the total time spent on care should have declined. Thus, our “estimate” is downward-biased, and this bias is stronger for the women than for the men. The “a priori conditions” also matter when judging the total care load. If, for example, we compared the full-time employed mothers and fathers in 2019, we would find that the women were spending 4.8 hours per day with their children while the men were spending only 2.5 hours, even though they were equally involved in the labour market. The absolute increase from 2019 to 2020 was similar for men and women, but it nevertheless resulted in a gendered care pattern.

A very important finding from our analysis was, however, that the fathers who increased the time they were spending on child care the most were not those with high levels of education,

but those with medium or low levels. Thus, the coronavirus crisis seems to have pulled less educated fathers more strongly into child care tasks than highly educated fathers. This finding challenges the results of prior investigations, which have regarded the highly educated as the vanguards of involved fatherhood. Whether these patterns were due to the type of employment of the less educated fathers, or whether these men were more likely to have a spouse who was working in a “systematically relevant industry branch” (such as health care or retail), could not be answered with our data. We were also unable to assess how durable these patterns might be, and whether they will have any long-term implications for paternal involvement and care.

A major caveat of our investigation is that the analysis was restricted to the individual level. With the available data, it was, unfortunately, not possible to study the gendered division of care within the household context. Thus, while our study was able to provide insights into how the coronavirus crisis affected the time the fathers and the mothers were spending with their children, it did not show how the gendered division of care obligations within the household may have been shifted. A comprehensive test of the “re-traditionalisation hypothesis” would require this type of data. Another disadvantage of our investigation was that we relied on a self-reported measure of the time the parents spent with their children. There is strong evidence that there is often a mismatch between an individual’s own perceptions of his/her personal contributions to child care and housework, and those of his/her partner (Geist, 2010). From the perspective of mothers, fathers tend to overrate their engagement levels (*ibid.*). However, this measurement problem was attenuated in our modelling strategy because we were comparing data from the same individuals for 2019 and 2020. Thus, if we assume inter-individual measurement invariance, this problem levels off. Moreover, our data rely on a rather rough measure of child care involvement that does not take into account the gender differences in the activities that fathers and mothers engage in with their children (Raley, Bianchi, & Wang, 2012). Last but not least, selective unit non-response is a general concern in survey research,

but this problem was aggravated during the coronavirus crisis, when the interviews could be conducted only via telephone. Thus, it is likely that the interviewed fathers represented a highly selected group who were particularly involved in care giving. Unlike many other studies that relied on convenience sampling strategies, our data were drawn from an existing panel survey. This survey also provided detailed information on the characteristics of the individuals who did not participate in the survey, which enabled us to use carefully constructed non-response-adjusted and post-stratified weighting factors. Nevertheless, data quality issues are a much-neglected area in the growing body of “coronavirus-related” survey research. These pressing issues have only recently started garnering the attention that they deserve (Auspurg, 2020). In order to evaluate their long- and short-term consequences, further high-quality studies are required. We hope that this investigation adds to this body of research.

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Table A1: Difference-in-difference model: predicted differences in child care hours. Dependent variable: difference in child care hours per weekday between 2020 and 2019

	Women in partnerships	Men in partnerships
Region		
Eastern Germany	1.39 (-0.36,2.69)	2.11 (0.68,0.3.43)
Western Germany	3.18 (2.23,4.13)	2.67 (1.60,3.55)
Migration background		
No migration background	2.86 (1.82,3.78)	2.48 (1.28,3.52)
Migration background	2.75 (1.23,4.63)	2.80 (0.66,4.15)
Age youngest child in household		
Age 0-2	1.40 (-0.34,3.23)	1.76 (-0.62, 4.14)
Age 3-5	4.06 (2.26,5.68)	3.26 (1.44, 4.74)
Age 6-11	2.87 (1.94,3.77)	2.55 (1.35,3.78)
Number of children in household		
One child	1.96 (0.56,3.09)	2.54 (1.09,3.67)
Two children	3.73 (2.55,4.76)	2.29 (0.90,3.82)
Three or more children	2.02 (-0.19,4.15)	2.97 (0.44,5.23)
Level of education		
Low (CASMIN 0,1a,1b,2b)	3.57 (0.45,5.93)	3.24 (-0.49,5.45)
Medium (CASMIN 1c,2a,2c)	3.04 (1.88,4.28)	3.62 (1.96, 5.29)
High (CASMIN 3a,3b)	2.35 (1.06,3.52)	1.46 (0.45,2.56)
Child care time in 2019		
0-2 hours	5.03 (3.71,6.21)	3.29 (2.44,4.27)
3-5 hours	3.71 (2.89,4.56)	1.92 (0.54,2.86)
6 or more hours	1.30 (0.27, 2.33)	-4.08 (-10.79,0.50)
Employment status 2019		
Full-time	3.06 (1.38,4.76)	2.73 (1.83,3.64)
Part-time	3.05 (2.04,4.06)	3.70 (0.00,5.87)
Not employed	2.46 (0.39,4.30)	-1.76 (-6.46,1.34)
Other	2.12 (0.07,4.41)	4.73 (-0.18,10.55)
Sample Size (unweighted)	603	322
Model fit (adj. r square)	0.14	0.29

Note: Weighted analysis. Values in parentheses denote the 95% confidence intervals for the predicted difference values derived using basic bootstrap.